# Print Vendor Instructions

## How to use this file

Operator's Manuals

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- The body for all manuals is identical regardless of the cover.
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- This instruction sheet is NOT part of the manual and must not be printed.
- Pages labeled "THIS PAGE INTENSIONALLY BLANK" are placement pages and should NOT be printed.

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(FOR PLACEMENT ONLY - DO NOT PRINT)

Simplicity MASSEY FERGUSON AGCO

# OPERATOR'S MANUAL

## Coronet / 400 / 2400 Series

### 11HP Gear Riders

| Mfg. No. | Description |
|---|---|
| 1693303 | Coronet, 11HP Gear |
| 1693309 | Coronet, 11HP Gear (Export) |
| 1693315 | 411G, 11HP Gear |
| 1693319 | 2411G, 11HP Gear |
| 1694187 | 2411G, 11HP Gear |

### 13HP Hydro Riders

| Mfg. No. | Description |
|---|---|
| 1693305 | Coronet, 13HP Hydro |
| 1693311 | Coronet, 13HP Hydro (Export) |
| 1693882 | 413H, 13HP Hydro |
| 1693884 | 2413H, 13HP Hydro |
| 1694288 | Coronet, 13HP Hydro |
| 1694289 | 2413H, 13HP Hydro |
| 1694290 | 413H, 13HP Hydro |

### 14HP Hydro Riders

| Mfg. No. | Description |
|---|---|
| 1693307 | Coronet, 14HP Hydro |
| 1693313 | Coronet, 14HP Hydro (Export) |
| 1693317 | 414H, 14HP Hydro |
| 1693321 | 2414H, 14HP Hydro |

### 16HP Hydro Riders

| Mfg. No. | Description |
|---|---|
| 1694115 | Coronet, 16HP Hydro |
| 1694117 | 416H, 16HP Hydro |
| 1694189 | 2416H, 16HP Hydro |

### 30" Mower Decks

| Mfg. No. | Description |
|---|---|
| 1692543 | 30" Mower Deck |
| 1692544 | 30" Mower Deck |
| 1694053 | 30" Mower Deck |

### 34" Mower Decks

| Mfg. No. | Description |
|---|---|
| 1692545 | 34" Mower Deck |
| 1693168 | 34" Mower Deck (Export) |
| 1692545 | 34" Mower Deck |
| 1692546 | 34" Mower Deck |
| 1694191 | 34" Mower Deck |

**1719188-08**
(Supercedes 1719190 & 1719189)
Rev 8/2002
TP 100-2164-08-CO-SMA

Simplicity®

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*NOTE: In this manual, “left” and “right” are referred to as seen from the operating position.*

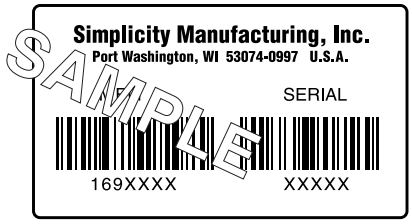
**⚠ WARNING**

**Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.**

# Identification Numbers & Safety Decals

## IDENTIFICATION TAG LOCATIONS

**When contacting your Authorized Dealer for replacement parts, service, or information YOU MUST HAVE THESE NUMBERS.**



## IDENTIFICATION NUMBERS

Record your model name/number, unit and mower deck manufacturer numbers and engine serial number in the space provided for easy reference.

- The **Unit I.D. tag** is located on the left-side, of the frame, as shown below.
- The **Mower Deck I.D. tag** is also on the left side, on top of the mower deck.
- For location of **Engine Serial Number**, refer to the Engine Owner's Manual.

Be sure to fill out and return the Warranty Registration Card supplied with your unit.

| PRODUCT REFERENCE DATA | |
|---|---|
| Model Description Name/Number | |
| Unit MFG Number | Unit SERIAL Number |
| Mower Deck MFG Number | Mower Deck SERIAL Number |
| Dealer Name | Date Purchased |
| **ENGINE REFERENCE DATA** | |
| Engine Make | Engine Model |
| Engine Type/Spec | Engine Code/Serial Number |

## SAFETY DECALS

This unit has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

We have placed several safety labels on the unit to remind you of important operating information.

All DANGER, WARNING, CAUTION and instructional messages on your rider and mower should be carefully read and obeyed. Personal bodily injury can result when these instructions are not followed. The information is for your safety and it is important! The safety decals below are on your rider and mower.

If any of these decals are lost or damaged, replace them at once. See your local dealer for replacements.

These labels are easily applied and will act as a constant visual reminder to you, and others who may use the equipment, to follow the safety instructions necessary for safe, effective operation.

**Decal - Operating Information**
**Part No. 1713490**

**Decal - Danger**
**Part No. 1704276**

**Decal - Danger**
**Part No. 1704277**

# Safety Rules & Information

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of unit, severe personal injury or death to you, or bystanders, or damage to property or equipment.
**This mowing deck is capable of amputating hands and feet and throwing objects.**
The triangle ⚠ in text signifies important cautions or warnings which must be followed.

**GENERAL OPERATION**

- Read, understand, and follow all instructions in the manual and on the unit before starting.
- Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.
- Only allow responsible adults, who are familiar with the instructions, to operate the unit (local regulations can restrict operator age).
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade(s).
- Be sure the area is clear of other people before mowing. Stop unit if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while travelling in reverse.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the deflector in place.
- Slow down before turning.
- Never leave a running unit unattended. Always disengage the PTO, set parking brake, stop engine, and remove keys before dismounting.
- Turn off the PTO switch to disengage the blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- Mow only in daylight or good artificial light.
- Do not operate the unit while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the unit into a trailer or truck.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from injury.
- Keep in mind the operator is responsible for accidents occurring to other people or property.
- All drivers should seek and obtain professional and practical instruction.
- Always wear substantial footwear and trousers. Never operate when barefoot or wearing sandals.
- Before using, always visually check that the blades and blade hardware are present, intact, and secure. Replace worn or damaged parts.
- Never operate the machine with defective guards, or without safety protective devices in place.
- Disengage attachments before: refueling, removing an attachment, making adjustments (unless the adjustment can be made from the operator's position).
- When the machine is parked, stored, or left unattended, lower the cutting means unless a positive mechanical lock is used.
- Follow the manufacturer's recommendation for wheel weights or counterweights.
- Before leaving the operator's position for any reason, engage the parking brake, disengage the PTO, stop the engine, and remove the key.
- To reduce fire hazard, keep the unit free of grass, leaves, & excess oil. Do not stop or park over dry leaves, grass, or combustible materials.

## TRANSPORTING AND STORAGE

- When transporting the unit on an open trailer, make sure it is facing forward, in the direction of travel. If the unit is facing backwards, wind lift could damage the hood.
- Always observe safe refueling and fuel handling practices when refueling the tractor after transportation or storage.
- Never store the unit (with fuel) in an enclosed poorly ventilated structure. Fuel vapors can travel to an ignition source (such as a furnace, water heater, etc.) and cause an explosion. Fuel vapor is also toxic to humans and animals.
- Always follow the engine manual instructions for storage preparations before storing the tractor for both short and long term periods.
- Always follow the engine manual instructions for proper start-up procedures when returning the unit to service.
- Never store the unit or fuel container inside where there is an open flame or pilot light, such as in a water heater. Allow unit to cool before storing.

## SLOPE OPERATION

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not operate on it.

Control of a ride-on machine sliding on a slope will not be regained by the application of the brake. The main reasons for loss of control are: insufficient tire grip on the ground, speed too fast, inadequate braking, the type of machine is unsuitable for it's task, lack of awareness of the ground conditions, incorrect hitching and load distribution.

**Do**

- See your authorized dealer for recommendations of wheel weights or counterweights to improve stability.
- Mow up and down slopes, not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the unit. Tall grass can hide obstacles.
- Use slow speed. Tires may lose traction on slopes even through the brakes are functioning properly. Choose a low gear so that you will not have to stop or shift while on the slope.
- Use extra care with grass catchers or other attachments. These can change the stability of the unit.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Always keep unit in gear especially when traveling downhill. When clutching, release clutch slowly.

**Do Not**

- Do not start or stop on a slope. If tires lose traction, disengage the blade(s) and proceed slowly straight down the slope.
- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.
- Do not try to stabilize the unit by putting your foot on the ground.
- Do not use grass catchers on steep slopes.
- Do not mow slopes you cannot back up.
- Do not shift to neutral and coast down hill.

### ⚠ WARNING

Never operate on slopes greater than 17.6 percent (10°) which is a rise of 3-1/2 feet (106 cm) vertically in 20 feet (607 cm) horizontally.

When operating on slopes use additional wheel weights or counterweights. See your dealer to determine which weights are available and appropriate for your unit.

Select slow ground speed before driving onto slope. In addition to front and rear weights, use extra caution when operating on slopes with rear-mounted grass catcher.

Mow UP and DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.

**Children**

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn unit off if children enter the area.
- Before and during reverse operation, look behind and down for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe unit operation.
- Never allow children to operate the unit.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

## TOWED EQUIPMENT

- Never allow children or others in or on towed equipment.
- Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
- Follow the manufacturer's recommendations for weight limit for towed equipment and towing on slopes.
- On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
- Travel slowly and allow extra distance to stop.
- Do not shift to neutral and coast down hill.

## EMISSIONS

- Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.
- Look for the relevant Emissions Durability Period and Air Index information on the engine emissions label.

## SERVICE AND MAINTENANCE

- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
  a) Use only an approved container.
  b) Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
  c) Never refuel the unit indoors.
- If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have dissipated.
- Replace all fuel tank caps and fuel container caps securely.
- Never fill containers inside a vehicle or on a truck bed with a plastic bed liner. Always place containers on the ground away from your vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
- Keep nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately.
- Maintain or replace safety and instruction labels as necessary.
- Never run the unit in an enclosed area where carbon monoxide fumes may collect.
- Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly and make necessary repairs if they are not functioning properly.
- Keep unit free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running unless specified otherwise in the engine manufacturer's manual.
- Do not remove the fuel filter when the engine is hot as spilled gasoline may ignite. Do not spread fuel line clamps further than necessary. Ensure clamps grip hoses firmly over the filter after installation.
- Do not use gasoline containing METHANOL, gasohol containing more than 10% ETHANOL, gasoline additives, or white gas because engine/fuel system damage could result.
- If the fuel tank must be drained, it should be drained outdoors.
- Replace faulty silencers/mufflers.
- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.
- Use only factory authorized replacement parts when making repairs.
- Always comply with factory specifications on all settings and adjustments.
- Only authorized service locations should be utilized for major service and repair requirements.
- Never attempt to make major repairs on this unit unless you have been properly trained. Improper service procedures can result in hazardous operation, equipment damage and voiding of manufacturer's warranty.
- On multiple blade mowers, take care as rotating one blade can cause other blades to rotate.
- Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.
- Disengage drive attachments, stop the engine, remove the key, and disconnect the spark plug wire(s) before: clearing attachment blockages and chutes, performing service work, striking an object, or if the unit vibrates abnormally. After striking an object, inspect the machine for damage and make repairs before restarting and operating the equipment.
- Never place hands near the hydro pump cooling fan when the tractor is running. Cooling fan is located on top of the transaxle.

# Features & Controls

**Please take a moment and familiarize yourself with the name, location, and function of these controls** so that you will better understand the safety and operating instructions provided in this manual.

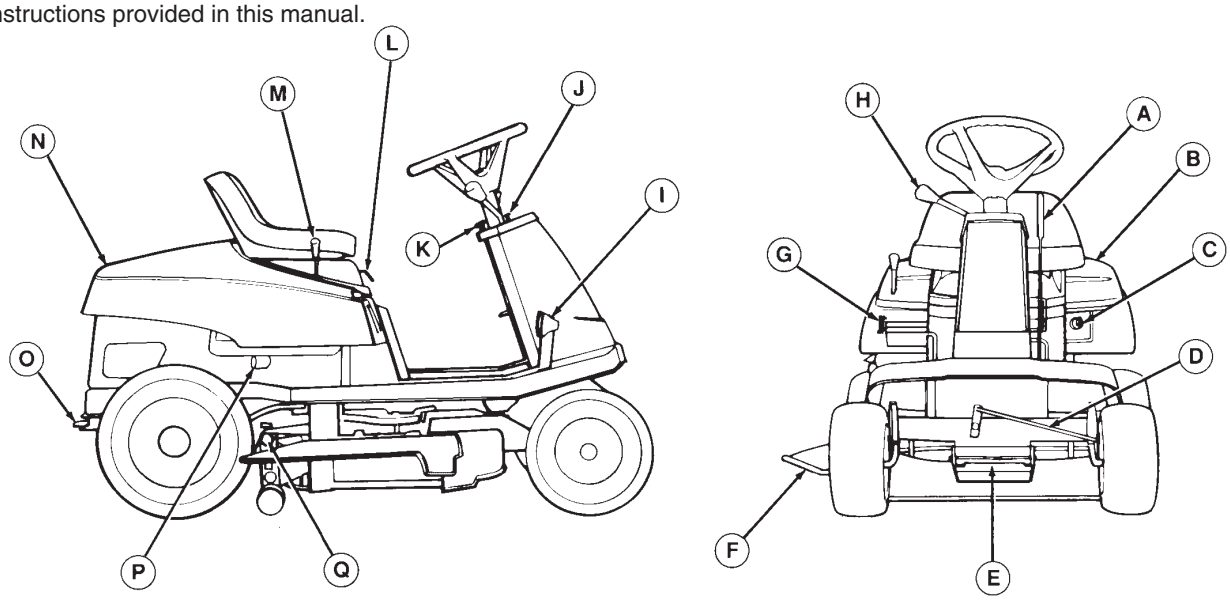



**Figure 1. Rider and Mower Features & Controls**

A. Mower Lift Lever
B. Fuel Tank
C. Ignition Switch
D. Auto-Leveling Rod™
E. Mower Hitch
F. Mower Deflector
G. PTO (Electric Clutch) Switch
H. Ground Speed Control Lever
I. Clutch/Brake Pedal
J. Parking Brake Control Knob
K. Dial-A-Cut Control™
L. Seat Adjustment lever
M. Engine Throttle / Choke Lever
N. Seat Deck
O. Drawbar
P. Engine Muffler
Q. Mower Levelling Nut.

## CONTROL FUNCTIONS

*The information below briefly describes the function of individual controls. Starting, stopping, driving, and mowing require the combined use of several controls applied in specific sequences. To learn what combination and sequence of controls to use for various tasks see the OPERATION section.*

### A. Mower Lift Lever

This raises the mower into the transport position.

### B. Fuel Tank

A 2 gal. (7.6L) see-through tank for fuel level reading.

### C. Ignition Switch

Starts and stops the engine.

### D. Auto-Levelling Rod™

Allows mower hitch (E) to raise and lower around very tight corners while mower remains level.

### E. Mower Hitch

Quick-hitch system allows easy removal and installation of mower and attachments

### F. Mower Deflector

Deflector is a necessary safety device to control objects thrown from the deck. Never mow without deflector in place.

### G. PTO (Electric Clutch) Switch

Controls electric clutch for attachments. Pull out to engage PTO; push in to disengage PTO.

### H. Ground Speed Control Lever

Controls ground speed and forward/reverse motion. Push forward to go forward; pull back to go in reverse. On hydro models, ground speed is controlled by how far lever is in forward or reverse position.

### I. Clutch/Brake Pedal

Press down to disengage clutch and apply brake. For parking brake, depress pedal fully and pull up on parking brake control knob (J).

### J. Parking Brake Control Knob

Engages parking brake. Depress clutch/brake pedal (I) fully and pull up knob to engage parking brake. To disengage brake, depress pedal and push knob down.

### K. Dial-A-Cut Control™

Adjusts height of mower cut.

### L. Seat Adjustment Lever

Automotive-style lever to allow seat to slide forward and backward.

### M. Engine Throttle/Choke Lever

Push forward to increase engine RPM. Push all the way forward for choke position.

### N. Seat Deck

Lightweight polymer-alloy deck lifts up for easy access to engine compartment.

### O. Drawbar

For use with utility carts or rear-mounted attachments, such as Twin Bag Grass Catcher.

### P. Engine Muffler

Exhausts hot air to the right side away from the fuel tank. Use caution around the heat shields and muffler until hot surfaces cool after operation.

### Q. Mower Levelling Nut

Allows for the accurate side-to-side levelling of the mower deck.

## SAFETY INTERLOCK SYSTEM

This unit is equipped with safety interlock switches and other safety devices. These safety systems are present for your safety, do not attempt to bypass safety switches, and never tamper with safety devices. Check their operation regularly.

### Operational SAFETY Checks

Your unit is equipped with a seat switch safety system. Check the seat switch operation every fall and spring with the following tests.

**Test 1 — Engine should NOT crank if any of the following conditions exist:**

- Transmission lever is OUT of Neutral, OR
- PTO switch is engaged (ON), OR
- Clutch/brake pedal is NOT fully depressed.

**Test 2 — Engine SHOULD crank if ALL of the following conditions are met:**

- Transmission lever is IN neutral, AND
- PTO switch is NOT engaged, AND
- Clutch/brake pedal IS fully depressed.

**Test 3 — Engine should SHUT OFF if any of the following conditions exist:**

- Operator rises off seat with transmission in gear (control lever out of the neutral gate) AND clutch/brake pedal NOT depressed, OR
- Operator rises off seat with clutch/brake pedal NOT fully depressed (parking brake OFF), OR
- Operator rises off seat with PTO engaged.

*NOTE: If operator returns to seat before engine stops, the engine will re-start and electric PTO clutch will re-engage.*

*NOTE: Once the engine has stopped, PTO switch must be turned off after operator returns to the seat in order to start the engine.*

**Test 4 — Blade Brake Check**

Mower blades and mower drive belt should come to a complete stop within five seconds after electric PTO switch is turned off (or operator rises off seat). If mower drive belt does not stop within five seconds, see your dealer.

**Test 5 — Neutral Safety Checks**

**Neutral Gate Check:** The unit should NOT move when the ground speed control lever is in the Neutral gate.

**Return-To-Neutral:** On hydrostatic models, the ground speed control lever should return to the neutral gate when the clutch/brake pedal is fully depressed.

## WARNING

**If the unit does not pass a safety test, do not operate it. See your authorized dealer. Under no circumstance should you attempt to defeat the purpose of the safety interlock system.**

# Operating the Rider

## GENERAL OPERATING SAFETY

Before first time operation:

- Be sure to read all information in the Safety and Operation sections before attempting to operate this rider and mower.
- Become familiar with all of the controls and how to stop the unit.
- Drive in an open area without mowing to become accustomed to the unit.

## CHECKS BEFORE STARTING

- Check that crankcase is filled to full mark on dipstick. See the engine Operator's Manual for instructions and oil recommendations.
- Make sure all nuts, bolts, screws and pins are in place and tight.
- Adjust the seat position, and make certain you can reach all controls from operator's position.
- Fill the gasoline tank with fresh gasoline. Refer to engine manual for gasoline recommendations.
- Make certain proper wheel or counterweights are installed if required, and use extra caution if you will be operating the unit on sloping ground.

## ⚠ WARNING

Never allow passengers to ride on the unit.

Before leaving the operator's position for any reason, engage the parking brake, disengage the PTO, stop the engine and remove the key.

To reduce fire hazard, keep the engine, rider and mower free of grass, leaves and excess grease. Do not stop or park rider over dry leaves, grass or combustible materials.

Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid over-filling and wipe up any spills.

## ⚠ DANGER

**OPERATING ON SLOPES CAN BE DANGEROUS**

**Never operate on slopes greater than 30 percent (16.7°) which is a rise of three feet vertically in 10 feet horizontally.**

**Operate the rider at a slow ground speed when driving onto slope.**

**When operating on slopes greater than 15 percent (8.5°) but less than 30 percent use addition wheel weights or counterweights.**

**In addition to counterweights, use extra caution when operating on slopes with rear-mounted grass catcher. Mow UP and DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.**

## CLUTCH/BRAKE PEDAL OPERATION

**HYDRO MODELS**

1. See Figure 2. Depressing the pedal from position A to B disengages the transmission drive and also returns the transmission control lever to neutral (from forward speeds). Fully depressing the pedal to position B applies the rider brake.
2. Parking brake is applied at pedal position B when parking brake control knob (C, Figure 2) is pulled up with pedal fully depressed.

## CLUTCH/BRAKE PEDAL OPERATION

**GEAR MODELS**

1. See Figure 2. Depressing the clutch pedal from position A to B activates neutral start circuit, disengages the transmission drive belt and allows the gear lever to be shifted.
2. Fully depressing the clutch/brake pedal from position A to B applies the rider brake. Parking brake is applied at position B when parking brake control knob (C, Figure 2) is pulled up with pedal depressed.

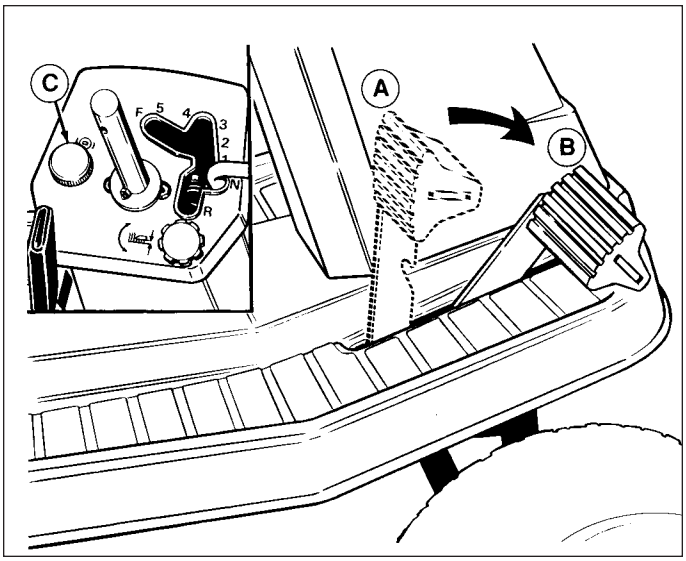



**Figure 2. Clutch/Brake Pedal**
A. Brake Pedal (Disengaged)
B. Brake Pedal (Engaged)
C. Parking Brake Knob

## STARTING THE ENGINE

1. Seat yourself on the rider seat in the operating position. Set the parking brake using the clutch/brake pedal (D, Figure 3) and parking brake knob (B).
2. Push down on the PTO switch (G, Figure 1) to disengage the PTO and place the ground speed control lever (C, Figure 3) in neutral.
3. For cold starts, set the engine throttle (M, Figure 1) to the choke position. For warm starts, set engine throttle at 1/2 throttle position .
4. Turn the key (C, Figure 1) to start and release when engine has started.
5. Move the engine throttle (M, Figure 1) to the slow position. Warm up the engine by running it for at least a minute before engaging the PTO or driving the rider.

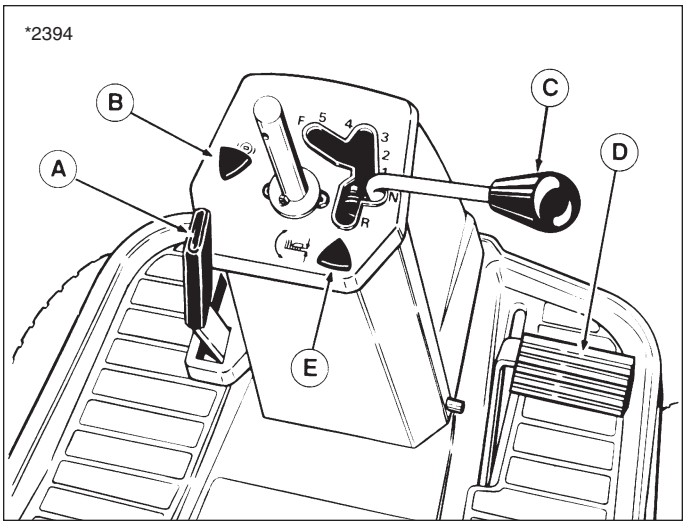



**Figure 3. Controls**
A. Mower Lift Lever
B. Parking Brake Knob
C. Ground Speed Control Lever
D. Clutch/Brake Pedal
E. Dial-A-Cut™ Control

## ⚠ WARNING

**Make certain the area of operation, and especially the direction of travel is clear of objects, people and animals.**

**Always look DOWN AND BEHIND before backing!**

## SELECTING GROUND & ENGINE SPEED

**On hydro models,** ground speed is infinitely variable according to how far the control lever (C, Figure 4) is moved in the forward or reverse position.

**On gear models,** ground speed is selected by depressing the clutch/brake pedal (D, Figure 4) and moving the control lever (C, Figure 4) to the appropriate gear selection. Most mowing is done in 3rd or 4th gear with engine set at full speed. If the terrain is rough, hilly or sloping, use first or second gear. If the grass is wet or over 3" (76mm) high, use full engine speed (with low gear) so the mower will have enough power to cut the grass.

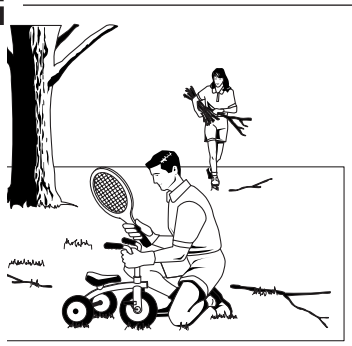
1. If you are ready to mow, lower the mower from the transport position using lever (A, Figure 4) and set the mowing height using the Dial-A-Cut™ Control (E, Figure 4).
2. Set the engine throttle (M, Figure 1) for full speed.
3. Use the PTO switch (G, Figure 1) to engage the PTO.
4. Release the parking brake by depressing the clutch/brake pedal (D, Figure 4) and pushing knob (B, Figure 4) down.
5. **On hydro models**, move the ground speed control lever (C, Figure 4) to the desired direction and speed of travel to set the rider in motion.

   **On gear models,** depress clutch/brake pedal, use the ground speed control lever to select the proper gear for conditions, then slowly release clutch/brake pedal to set the rider in motion.
6. Adjust engine throttle (M, Figure 1) to the desired speed. Full throttle is recommended for mowing.

### ⚠ WARNING

**Make certain the area of operation, and especially the direction of travel is clear of objects, people and animals.**

**Always look DOWN AND BEHIND before backing!**



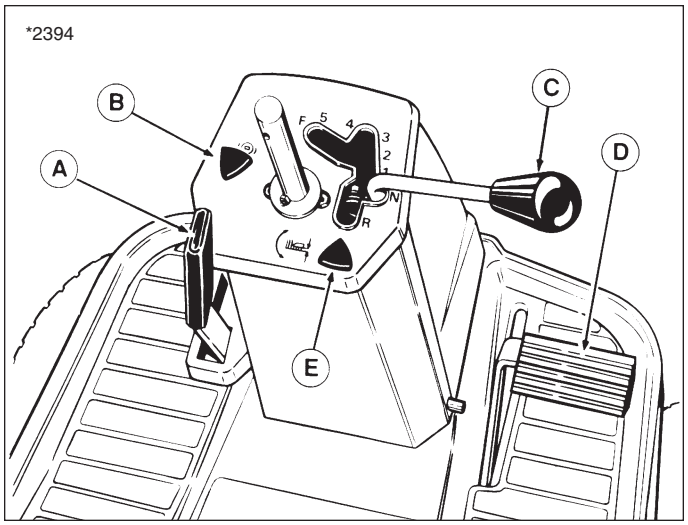



**Figure 4. Controls**

A. Mower Lift Lever
B. Parking Brake Knob
C. Ground Speed Control Lever
D. Clutch/Brake Pedal
E. Dial-A-Cut™ Control

## STOPPING THE RIDER

1. **On hydro models**, move the ground speed control lever (C, Figure 4) into the NEUTRAL position to make a gradual stop. To make a more rapid stop, depress the clutch/brake pedal (D, Figure 4).

   *NOTE: On hydro models, the ground speed control lever will return to neutral from forward automatically when the clutch/brake pedal is depressed.*

   **On gear models,** press the clutch/brake pedal (D, Figure 4) down only far enough to disengage the clutch to make a gradual stop. For a more rapid stop, press pedal down farther to apply the brake. Move the ground speed control lever to NEUTRAL before releasing the pedal.
2. Engage the parking brake by fully depressing clutch/brake pedal and pulling up on parking brake knob (B, Figure 4).
3. Use the PTO switch (G, Figure 1) to disengage the PTO.
4. Set the engine throttle (M, Figure 1) to 1/2 throttle setting and allow the engine to idle for 20 seconds. Stopping a hot engine too fast may cause engine damage.
5. Turn key (C, Figure 1) to OFF and remove it.

## ⚠ WARNING

**Make certain direction of travel is clear of objects, people and animals.**

**Always look DOWN AND BEHIND before backing!**

## OPERATING THE MOWER

1. When traveling to or from the work site, fully raise the mower using the mower lift lever (A, Figure 4). At the work site, lower mower using the lift lever.
2. Use the Dial-A-Cut™ control (E, Figure 4) to adjust the height of the mower. Pull back slightly on mower lift lever (A, Figure 4) to relieve pressure and turn clockwise to raise mower cutting height, or counter-clockwise to lower cutting height.

*NOTE: Cutting height scale is located on the quadrant at base of lift lever. Scale is numbered 1 thru 4, with 4 representing the highest cutting height.*

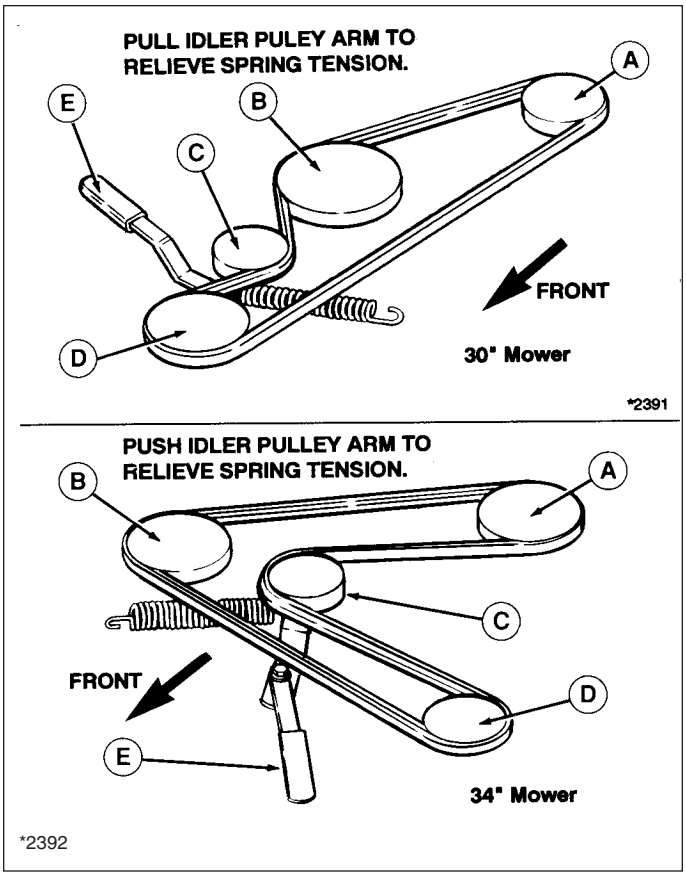



**Figure 5. Mower Belt Pattern**

A. PTO Pulley
B. Arbor Pulley (30”)
Right Arbor Pulley (34”)
C. Idler Pulley
D. Front Idler Pulley (30”)
Left Arbor Pulley (34”)
E. Idler Pulley Arm

## PUSHING THE RIDER BY HAND

### Hydro Models

1. Engine should be off and ignition key removed.
2. Place the mower in the transport position (up) using the mower lift lever (A, Figure 4).
3. **See Figure 6**—To push the rider by hand, the release lever must be placed in the PUSH position.
4. To drive the rider, release lever must be moved to the DRIVE position.

### Gear Model

1. Engine should be off and ignition key removed.
2. Place the mower in the transport position (up) using the mower lift lever (A, Figure 4).
3. Depress the clutch/brake pedal and place the ground speed control lever (C, Figure 4) in the neutral gate.
4. Unlock the parking brake.

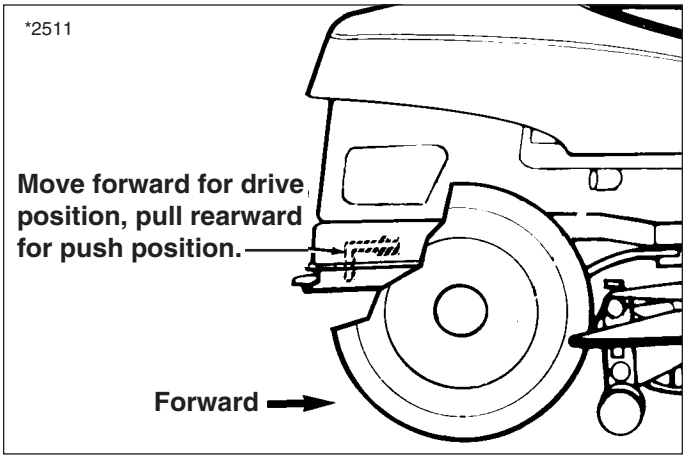



**Figure 6. Transaxle Release Lever - Hydro Models**

**DO NOT TOW RIDER**
Towing the unit will cause transmission damage. Do not use another vehicle to push or pull this unit.

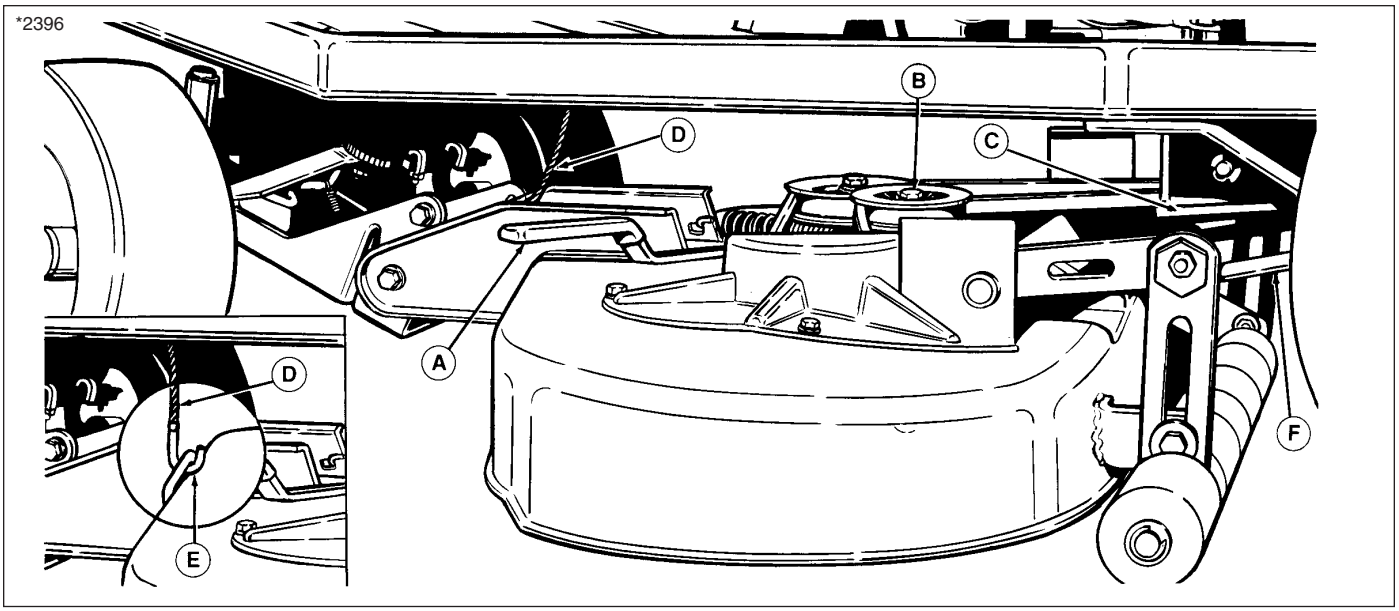



**Figure 7. Mower Removal/Installation (34" mower shown)**

A. Idler Pulley Arm
B. Idler Pulley
C. PTO (Electric Clutch) Pulley
D. Lift Cable
E. Lift Hook
F. Rear Trailing Arms

**⚠ WARNING**

Stop engine and remove key. Do not engage PTO until mower is completely removed or installed and operator is seated.

## MOWER REMOVAL AND INSTALLATION

*NOTE: Perform mower installation on a hard, level surface such as a concrete floor. For easier mower removal and installation, rear trailing arms (F, Figure 7) can be removed by removing spring clips and clevis pins.*

1. Park rider and turn off PTO switch and engine, remove the key and apply parking brake. Turn the wheels fully to the left.
2. On left-hand side of 34" mower, push idler pulley arm (A, Figure 7) to relieve belt tension.

   On right-hand side of 30" mower, pull idler pulley arm to relieve belt tension.
3. With belt tension relieved, remove belt from idler pulley (B, Figure 7) and PTO pulley (C). Removing belt relieves tension on the front hitch assembly.
4. With lift lever down and Dial-A-Cut™ control set to the lowest setting, remove lift cable (D, Figure 7) from mower hook (see inset illustration, Figure 7).

*NOTE: Pull back slightly on the lift lever to allow easier turning of the Dial-A-Cut™ control.*

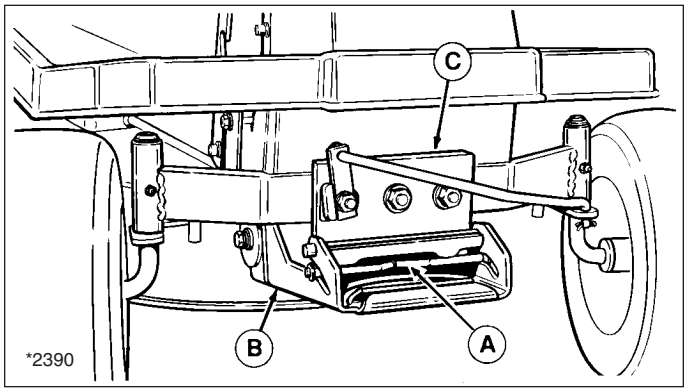



**Figure 8. Mower Hitch**

A. Lever
B. Mower Hitch
C. Rider Hitch Brackets

5. Remove mower hitch (B, Figure 8) from rider hitch brackets (C) by pulling spring-loaded lever (A) forward and lifting up on hitch. Place mower hitch on ground.
6. With wheels turned fully left, remove mower from underneath right-hand side of rider.
7. To install mower, reverse above steps. Check mower belt pattern (as shown in Figure 5 on page 11). Make sure that the mower lift cable is installed with hook toward the rear (see Figure 7 inset) and rear trailing arms (F, Figure 7) are positioned above rear torsion bar.

## STORAGE

### ⚠ WARNING

**Never store the unit (with fuel) in an enclosed, poorly ventilated structure. Fuel vapors can travel to an ignition source (such as a furnace, water heater, etc.) and cause an explosion.**

**Fuel vapor is also toxic to humans and animals.**

Before you store your unit for the off-season, read the Maintenance and Storage instructions in the Safety Rules section, then perform the following steps:

- Disengage the PTO, set the parking brake, & remove the key.
- Perform engine maintenance and storage measures listed in the engine owner's manual. This includes draining the fuel system, or adding stabilizer to the fuel (do not store a fueled unit in an enclosed structure - see above).
- Battery life will be increased if it is removed, put in a cool, dry place and fully charged about once a month. If the battery is left in the unit, disconnect the negative cable.

Before starting the unit after it has been stored:

- Check all fluid levels. Check all maintenance items.
- Perform all recommended check and procedures found in the engine owner's manual.
- Allow the engine to warm up for several minutes before use.

# Regular Maintenance

## MAINTENANCE SCHEDULE & PROCEDURES

The following schedule should be followed for normal care of your rider and mower. You will need to keep a record of your operating time. Determining operating time is easily accomplished by multiplying the time it takes to do one job by the number of times you've done the job, or you can install the optional hour meter.

| SAFETY ITEMS | See Page | Before First Use | Before Each Use | Every 5 Hours | Every 25 Hours | Every 100 Hours | Spring & Fall |
|---|---|---|---|---|---|---|---|
| Check Safety Interlock System | 7 | ● | | | | | ● |
| Check Rider Brakes | 22 | ● | | | | | ● |
| Check Mower Blade Stopping Time | 7 & 22 | ● | | | | ● | |
| **NORMAL CARE ITEMS** | **See Page** | **Before First Use** | **Before Each Use** | **Every 5 Hours** | **Every 25 Hours** | **Every 100 Hours** | **Spring & Fall** |
| Check Rider/Mower for loose hardware | — | ● | ● | ● | | | |
| Check Engine Oil Level | 15* | ● | ● | ● | | | ● |
| Check Engine Air Filter | 15* | ● | | | | ***● | |
| Change Engine Oil & Filter ** | * | ● | | | ***● Every 50 Hours | | ***● |
| Lubricate Rider & Mower | 16 | ● | | | | ***● | |
| Check Tire Pressure | 14 | ● | | | | ***● | |
| Check Transmission Fluid (Hydro Only)**** | — | ● | | Only if transmission is serviced. | | | |
| Check Fuel Filter | 15 | ● | | | | ● | |
| Clean Battery & Cables | 17 | ● | | | | ● | |
| Clean & Sharpen Mower Blades | 18 | ● | | | | ● | |

* See the engine manufacturer's owner's manual.
** Change original engine oil after first 5 hours of operation.
*** More often in hot (over 85° F: 30° C) weather or dusty operating conditions.
**** Transmission is a sealed unit and requires no regular interval fluid changes.

## CHECK TIRE PRESSURES

Tire Pressure should be checked periodically, and maintained at the levels shown in the chart. Note that these pressures may differ slightly from the "Max Inflation" stamped on the side-wall of the tires. The pressures shown provide proper traction, improve cut quality, and extend tire life.

| Tire | Pressure |
|---|---|
| Front | 20 psi (138 kPa) |
| Rear | 10 psi (69 kPa) |

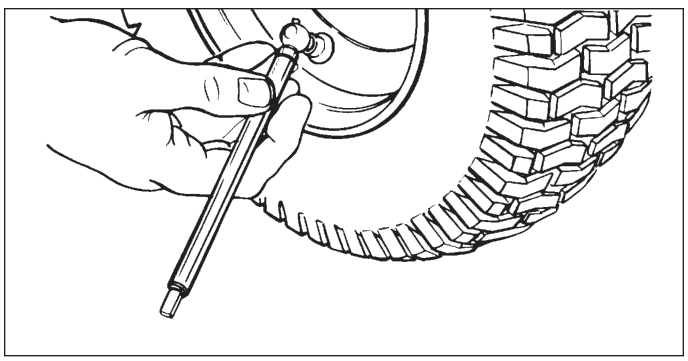


**Figure 9. Checking Tire Pressure**

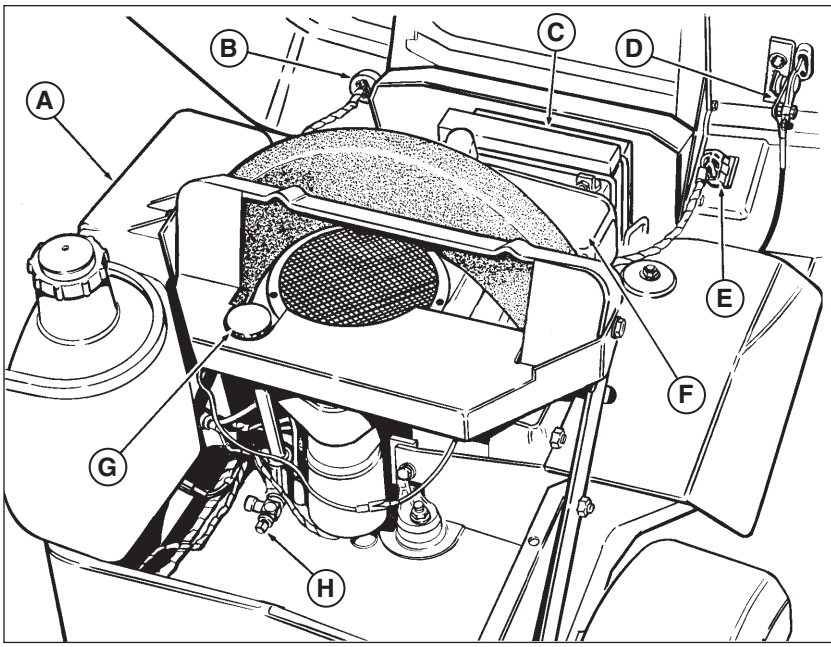



**Figure 10. Engine Compartment**

A. Fuel Tank
B. Ignition Switch
C. Battery
D. Throttle / Choke Cable
E. PTO Switch (Electric Clutch)
F. Air Filter
G. Oil Fill / Dipstick
H. Oil Drain
I. Fuel Filter (In-line, Not Shown)

## RAISING THE SEAT DECK

To gain access to the engine compartment, simply tilt the seat deck forward.

## CHECKING/ADDING FUEL

Check the gas tank (A, Figure 10) to be sure there is enough gasoline to complete the job. To add gasoline, remove the gas cap. Do not overfill. Leave room in the tank for fuel expansion. Refer to your engine manual for gasoline recommendations. Install and hand tighten the gas cap.

Do not use gasoline containing METHANOL, gasohol containing more than 10% ethanol, gasoline additives, premium gasoline, or white gas because engine/fuel system damage could result.

## FUEL FILTER

The fuel filter is located in fuel line between fuel tank and carburetor. If filter is dirty or clogged, replace as follows. Place a container below filter to catch spilled gasoline.

1. Using a pliers, open and slide hose clamps from fuel filter.
2. Remove hoses from filter.
3. Install new filter in proper flow direction in fuel line. Secure with hose clamps. See warning at beginning of procedure.

## ⚠ WARNING

**Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid over-filling and wipe up any spills.**

**Do not remove fuel filter when engine is hot, as spilled gasoline may ignite. DO NOT spread hose clamps further than necessary. Ensure clamps grip hoses firmly over filter after installation.**

## OIL & FILTER CHANGE

Refer to engine owners manual.

## CHECK / CHANGE AIR FILTER

Refer to engine owners manual.

## REPLACE SPARK PLUG

Refer to engine owners manual.

## LUBRICATION

Lubricate the rider and mower as shown in Figures 11 - 16. When a grease gun is shown, wipe the fitting clean, apply two or three shots of lithium base automotive grease, and wipe off excess grease. When an oil can is shown, wipe the area clean, apply a few drops of oil (SAE 30), then wipe up drips or spills.

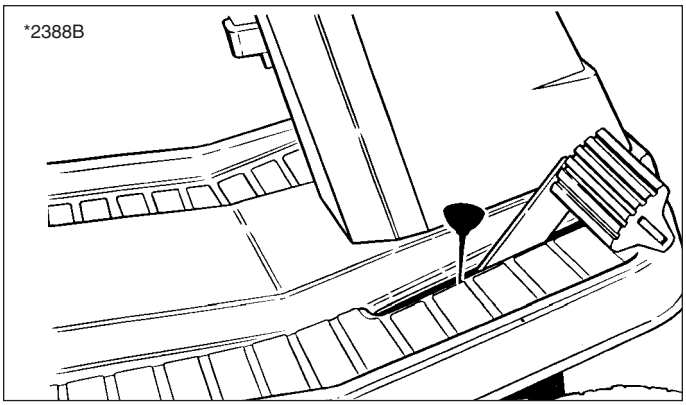



**Figure 11. Brake Pedal Pivot Point**

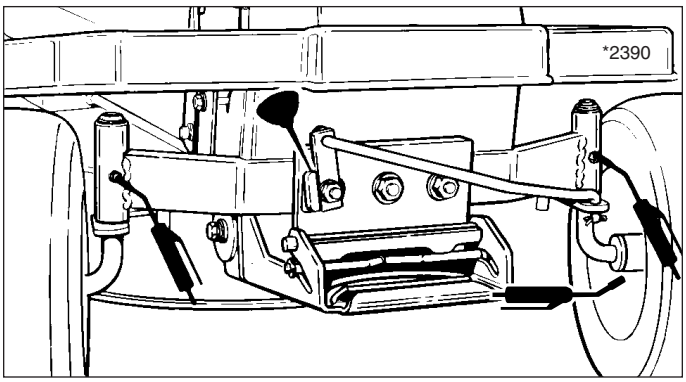



**Figure 12. Front Axle Lubrication Points**

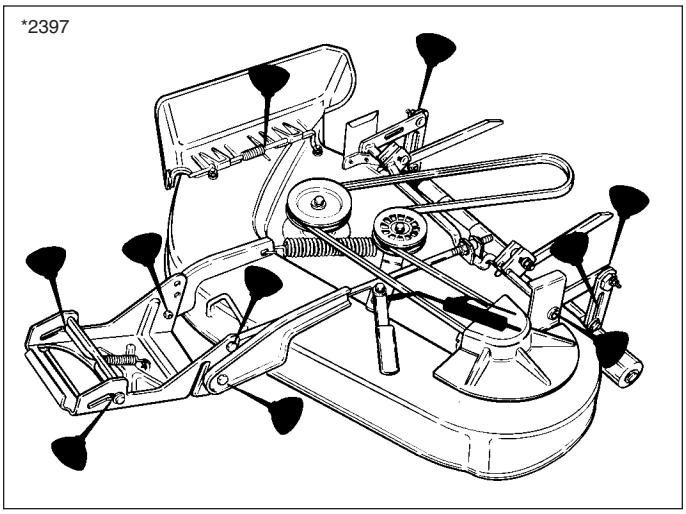



**Figure 13. Mower Deck Lubrication Points**

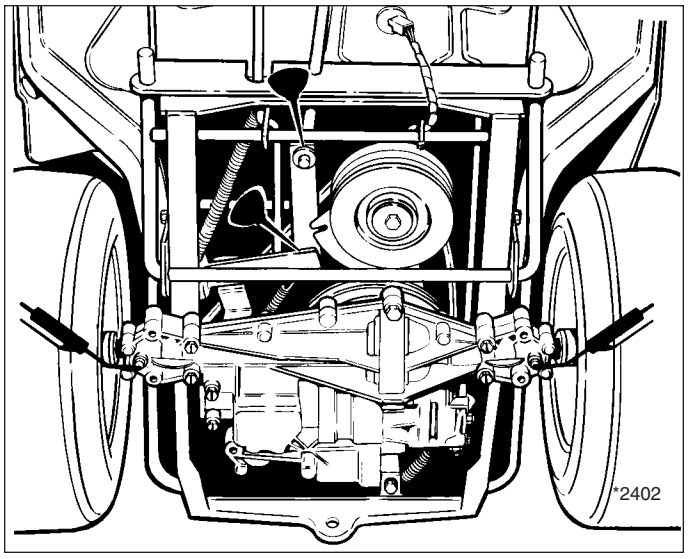



**Figure 14. Rider Lubrication Points - Rear Half (Gear Model Shown)**

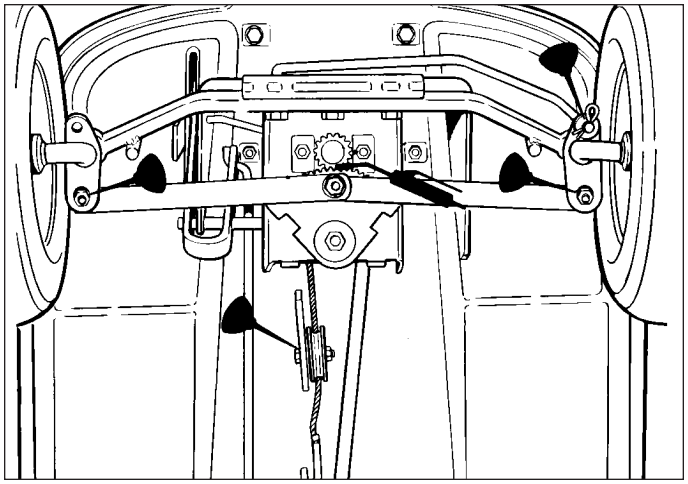


**Figure 15. Rider Lubrication Points - Front Half**

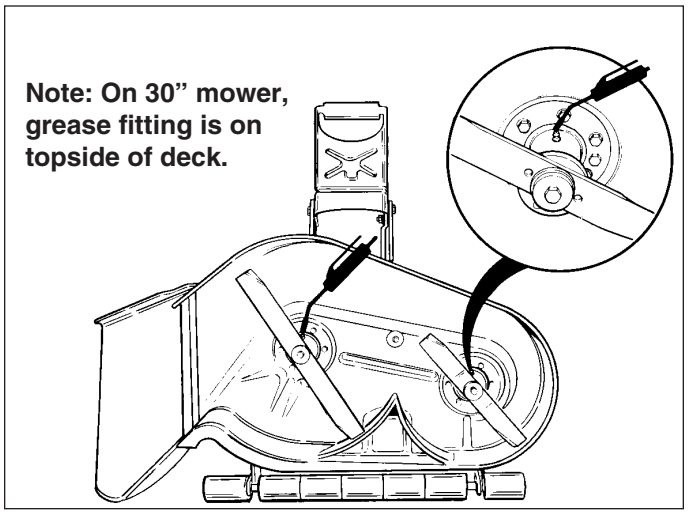



**Figure 16. Arbor Lubrication Points**

## ⚠ WARNING

Be careful when handling the battery. Avoid spilling electrolyte. Keep flames and sparks away from the battery.

When removing or installing battery cables, disconnect the negative cable FIRST and reconnect it LAST. If not done in this order, the positive terminal can be shorted to the frame by a tool.

# BATTERY MAINTENANCE

## Checking the Battery Fluid

1. Raise the seat deck.
2. Remove battery filler cap (A, Figure 17). Fluid must be even with the bottom of ring (B). If not, add distilled water.
3. Reinstall filler cap.

## Cleaning the Battery and Cables

1. Disconnect the cables from the battery, negative cable first (B, Figure 18).
2. Remove the battery and clean the compartment with a solution of baking soda and water.
3. Clean the battery terminals and cable ends with a wire brush until shiny.
4. Reinstall the battery and reattach the battery cables, positive cable first (see A, Figure 18).
5. Coat the cable ends and battery terminals with petroleum jelly or non-conducting grease.

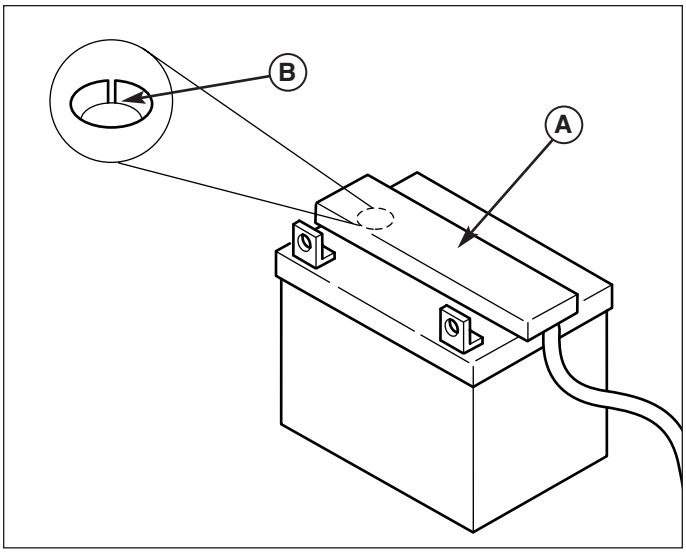



**Figure 17. Battery Fluid Check**
A. Battery Cap
B. Bottom of Split Ring

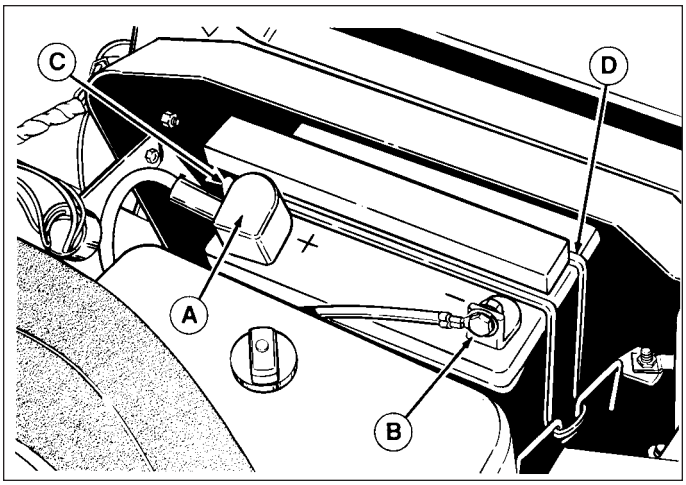



**Figure 18. Battery**
A. Positive Battery Terminal
B. Negative Battery Terminal
C. Vent Tube
D. Holddown Strap

## SERVICING THE MOWER BLADES

### ⚠ WARNING

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handling of blades may result in serious injury.

1. Remove mower from the rider.
2. Blades should be sharp and free of nicks and dents. If not, sharpen blades as described in following steps.
3. To remove blade for sharpening, use wooden block to hold blade while removing the blade mounting cap-screw (Figure 19).
4. Use a file to sharpen blade to fine edge. Remove all nicks and dents in blade edge. If blade is severely damaged, it should be replaced.
5. Balance the blade as shown in Figure 20. Center the blade's hole on a nail lubricated with a drop of oil. A balanced blade will remain level.
6. Reinstall each blade with the tabs pointing up toward deck as shown in Figure 21. Secure with a capscrew (D), cup washer (C) and hex washer (B). Use a wooden block to prevent blade rotation and torque capscrews to 45-55 ft.lbs. (61-75 N.m.).

### ⚠ WARNING

For your personal safety, blade mounting capscrews must each be installed with a hex washer and spring washer, then securely tightened. Torque blade mounting capscrew to 45-55 ft. lbs. (61-75 N.m.)

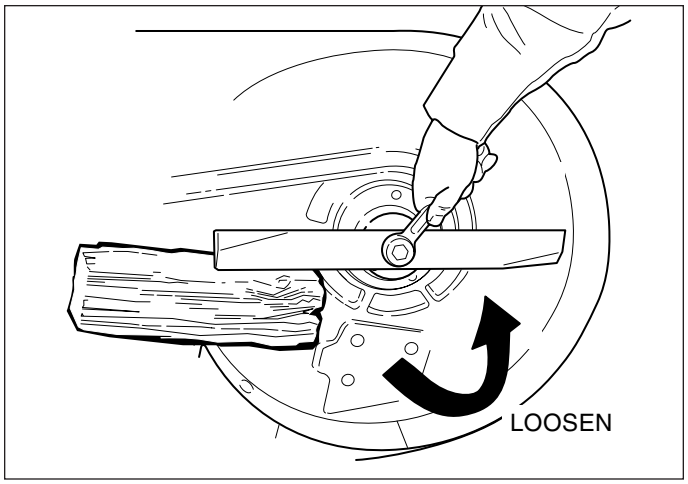



**Figure 19. Removing The Blade**

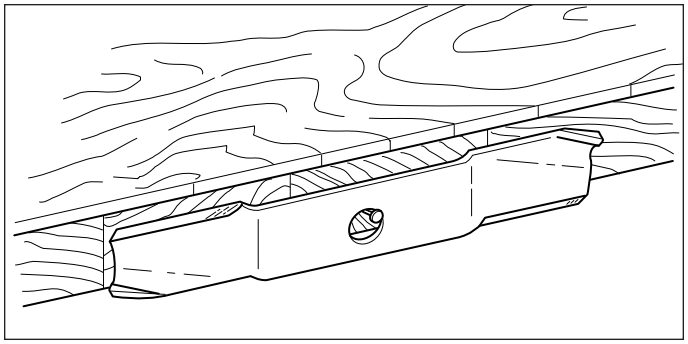


**Figure 20 Balancing The Blade**

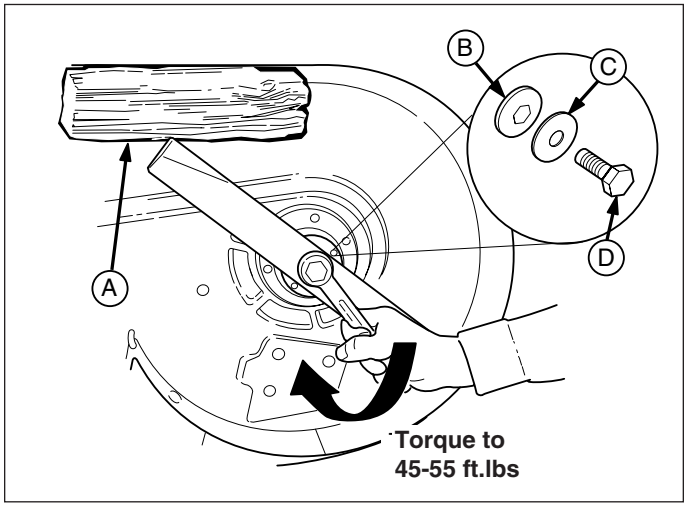



**Figure 21. Installing The Blade**

**A. Wooden Block** **C. Cup Washer**
**B. Hex Washer** **D. Capscrew**

# Troubleshooting Adjustments & Service

## TROUBLESHOOTING

While normal care and regular maintenance will extend the life of your equipment, prolonged or constant use may eventually require that service be performed to allow it to continue operating properly.

The troubleshooting guide below lists the most common problems, their causes and remedies.

See the information on the following pages for instructions on how to perform most of these minor adjustments and service repairs yourself. If you prefer, all of these procedures can be performed for you by your local authorized dealer.

### ⚠ WARNING

To avoid serious injury, perform maintenance on the tractor or mower only when the engine is stopped and the parking brake engaged.

Always remove the ignition key, disconnect the spark plug wire and fasten it away from the plug before beginning the maintenance, to prevent accidental starting of the engine.

## TROUBLESHOOTING THE RIDER

| PROBLEM | CAUSE | REMEDY |
|---|---|---|
| Engine will not turnover or start. | 1. Ground speed control lever not in neutral-start position. | 1. Shift into neutral. |
| | 2. PTO (electric clutch) switch in ON position. | 2. Place in OFF position. |
| | 3. Out of fuel. | 3. If engine is hot, allow it to cool, then refill the fuel tank. |
| | 4. Engine flooded. | 4. Move throttle control out of CHOKE position . |
| | 5. Circuit breaker tripped. | 5. Wait one minute for automatic reset. Replace if defective (see your dealer). |
| | 6. Battery terminals require cleaning. | 6. See Normal Care section. |
| | 7. Battery discharged or dead. | 7. Recharge or replace. |
| | 8. Wiring loose or broken. | 8. Visually check wiring & replace broken or frayed wires. Tighten loose connections. |
| | 9. Solenoid or starter motor faulty. | 9. Repair or replace. |
| | 10. Safety interlock switch faulty. | 10. Replace if needed (see your dealer.) |
| | 11. Spark plug(s) faulty, fouled or incorrectly gapped. | 11. Clean and gap or replace. See engine manual. |
| | 12. Water in fuel. | 12. Drain fuel & refill with fresh fuel. |
| | 13. Old stale gas. | 13. Drain fuel & replace with fresh fuel. |
| | 14. Clutch/brake pedal not depressed. | |
| Engine starts hard or runs poorly. | 1. Fuel mixture too rich. | 1. Move the throttle control out of the CHOKE position. If problem persists, clean the air filter. (See engine manual.) |
| | 2. Carburetor adjusted incorrectly. | 2. See engine manual. |
| | 3. Spark plug(s) faulty, fouled, or incorrectly gapped. | 3. Clean & gap or replace. See engine manual. |
| Engine knocks. | 1. Low oil level. | 1. Check/add oil as required. |
| | 2. Using wrong grade oil. | 2. See engine manual. |
| Excessive oil consumption. | 1. Engine running too hot. | 1. Clean engine fins, blower screen and air cleaner. |
| | 2. Using wrong weight oil. | 2. See engine manual. |
| | 3. Too much oil in crankcase. | 3. Drain excessive oil. |
| Engine exhaust is black. | 1. Dirty air filter. | 1. Clean air filter. See engine manual. |
| | 2. Choke not fully open. | 2. Move throttle control out of CHOKE position. If problem persists, check air filter and carburetor adjustments. See engine manual. |

*TROUBLESHOOTING THE RIDER (CONTINUED)*

| PROBLEM | CAUSE | REMEDY |
|---|---|---|
| Engine runs, but rider will not drive. | 1. Ground speed control lever in neutral. | 1. Shift in forward or reverse. |
| | 2. (Hydro models only) Transmission release lever in "push" position. | 2. Move into drive position. |
| | 3. Belt is broken. | 3. See Drive Belt Replacement. |
| | 4. Drive belt slips. | 4. See problem and cause below. |
| | 5. Brake is not fully released. | 5. See Brake Adjustment. |
| Rider drive belt slips. | 1. Clutch is out of adjustment. | 1. See your dealer. |
| | 2. Pulleys or belt greasy or oily. | 2. Clean as required. |
| | 3. Belt stretched or worn. | 3. Replace with correct belt. |
| | 4. Idler pulley pivot bracket "frozen" in declutched position. | 4. Remove idler pulley, clean and lubricate. |
| Brake will not hold. | 1. Brake is incorrectly adjusted. | 1. See Brake Adjustment. |
| | 2. Internal brake disc on transaxle worn. | 2. See your dealer. |
| Rider steers hard or handles poorly. | 1. Steering linkage is loose. | 1. Check and tighten any loose connections. See Steering Gear Adjustment. |
| | 2. Improper tire inflation. | 2. Check and correct. |
| | 3. Spindle bearings dry. | 3. Grease spindles. See Lubricating the rider. |

## TROUBLESHOOTING THE MOWER

| PROBLEM | CAUSE | REMEDY |
|---|---|---|
| Mower will not raise. | 1. Lift cable not properly attached or damaged. | 1. Attach or repair. |
| Mower cut is uneven. | 1. Mower not leveled properly. | 1. See Mower Adjustment. |
| | 2. Rider tires not inflated equally or properly. | 2. See Normal Care. |
| Mower cut is rough looking. | 1. Engine speed too slow. | 1. Set to full speed. |
| | 2. Ground speed too fast. | 2. Set ground speed control lever at a slower ground speed. |
| | 3. Blades dull and require sharpening. | 3. See Servicing the Mower Blades. |
| | 4. Mower drive belt slipping. | 4. Belt oily or worn. Clean or replace belt as necessary. |
| | 5. Check PTO (Electric Clutch) Adjustment. | 5. Clutch may need to be adjusted. |
| | 6. Blades not properly fastened to arbors. | 6. See Servicing the Mower Blades. |
| Engine stalls easily with mower engaged. | 1. Engine speed too slow. | 1. Set for 3/4 to full throttle. |
| | 2. Ground speed too fast. | 2. Reduce ground speed. |
| | 3. Carburetor not adjusted properly. | 3. Adjust carburetor (See engine owners manual.) |
| | 4. Cutting height set too low when mowing tall grass. | 4. Cut tall grass at maximum cutting height during first pass. |
| | 5. Discharge chute jamming with cut grass. | 5. Cut grass with discharge pointing toward previously cut area. |
| Excessive mower vibration. | 1. Blade mounting screws are loose. | 1. Tighten to 45-55 ft.lbs. (61-75 N.m.). |
| | 2. Mower blade(s), arbors, or pulleys are bent. | 2. Check and replace as necessary. |
| | 3. Mower blade(s) out of balance. | 3. Remove, sharpen and balance blade(s). See Servicing the Mower Blade(s). |
| | 4. Belt installed incorrectly. | 4. See Belt Replacement. |
| Excessive belt breakage. | 1. Bent or rough pulleys. | 1. Repair or replace. |
| | 2. Using incorrect belt. | 2. See your dealer. |
| Mower drive belt slips or fails to drive. | 1. Idler pulley spring broken or not properly attached. | 1. See your dealer. |
| | 2. Mower drive belt broken. | 2. Replace. |

## SEAT ADJUSTMENT

Use the lever on the front of the seat (See L, Figure 1 on page 6) to adjust the seat forward or rearward for best rider comfort.

**⚠ WARNING**

**To avoid serious injury, perform adjustments only with engine stopped, key removed and rider on level ground.**

## STEERING GEAR ADJUSTMENT

If there is excessive slack in the steering system, the steering gear can be reindexed to the steering shaft.

1. See Figure 22. Loosen the two capscrews (A) and push bracket so that gear teeth are closely meshed.
2. Tighten nuts after adjustment.

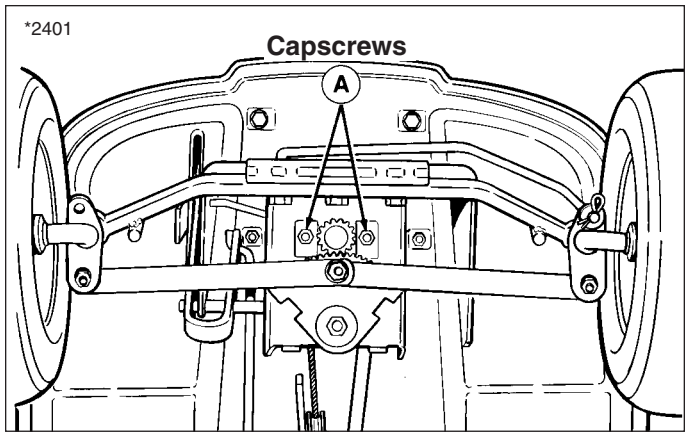



**Figure 22. Steering Gear Adjustment**
**A. Capscrews**

## STEERING WHEEL ADJUSTMENT

Your unit is equipped with a dual position steering shaft to allow for steering wheel adjustment for rider comfort.

1. Pull down on the rubber boot to expose the two holes in the steering shaft (A, Figure 23).
2. Use a suitable drift to remove the roll pin at the base of the steering wheel.
3. Align the hole in the steering wheel with the appropriate steering shaft hole and install the roll pin.

*NOTE: Steering wheel is factory installed with the roll pin in the bottom hole.*

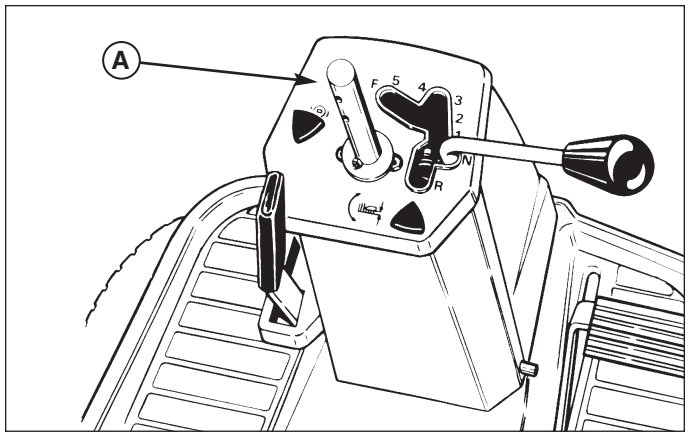



**Figure 23. Steering Wheel Height Adjustment**
**A. Steering Shaft**

## BRAKE ADJUSTMENT

### Brake Adjustment - Gear Models

1. Place the transmission in gear and release the parking brake.
2. Move the brake lever (B) forward. There should be a 1/8" gap between the lever (B) and the stop (C) as shown in Figure 24.
3. To adjust clearance, turn nut (D) clockwise to decrease the gap or turn nut counterclockwise to increase the gap.
4. Set the parking brake. Loosen or tighten adjustment nut (E) to achieve a 2 9/16"–2 5/8" compressed spring length as shown in Figure 24.

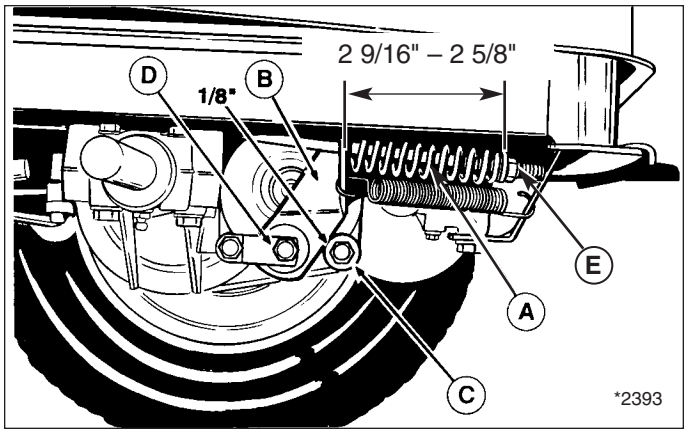



**Figure 24. Brake Adjustment (Gear Model)**
**A. Compressed Spring**
**B. Brake Lever**
**C. Stop**
**D. Nut**
**E. Adjustment Nut**

### Brake Adjustment - Hydro Models

1. Release the parking brake.
2. Place a .025" feeler gauge (A, Figure 25) between the two outer brake stators (refer to inset illustration). The gap should be between .025"–.030". To adjust:
   a. Remove cotter pin from castellated nut if present.
   b. To decrease gap, hold feeler gauge in gap and turn nut (B) clockwise until resistance is felt on the feeler gauge. To increase gap, turn nut (B) counterclockwise and recheck gap.
   c. If cotter pin was removed, back off nut (counterclockwise) until the nearest slot is aligned with hole in threads. Replace cotter pin.
3. Set the parking brake. Loosen or tighten adjustment nut (C) to achieve a 2 11/16"–2 13/32" compressed spring length as shown in Figure 25.
4. Lubricate the stators with spray lubricant (see Figure 25).

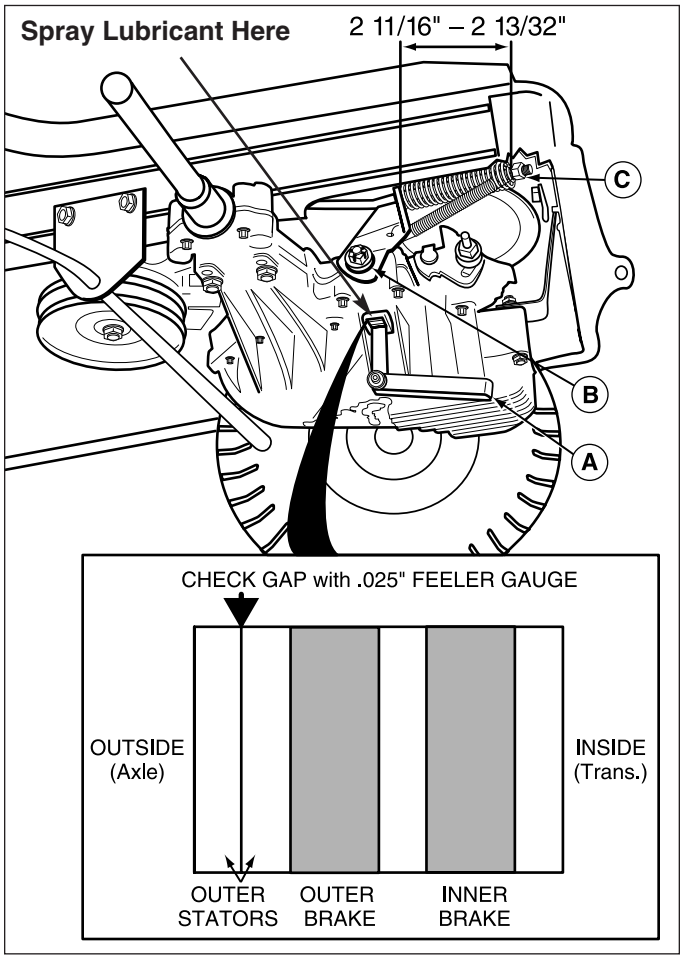



**Figure 25. Brake Adjustment (Hydro Model)**
**A. Feeler Gauge**
**B. Nut**
**C. Adjustment Nut**

## BLADE BRAKE ADJUSTMENT

Mower blades and mower drive belt should come to a complete stop within five seconds after electric PTO switch is turned off.

1. With rider in neutral, PTO disengaged and operator in seat, start the rider engine.
2. Look over the left-hand footrest at the mower drive belt. Engage the PTO and wait several seconds. Disengage the PTO and check the amount of time it takes for the mower drive belt to stop.
3. If mower drive belt does not stop within five seconds, see your dealer.

## MOWER ADJUSTMENTS

If the cut is uneven, the mower may need leveling. Unequal or improper tire pressure may also cause an uneven cut. Make sure tire pressure is correct as specified in Checking Tire Pressure. To achieve proper mower levelling, perform Side-To-Side Leveling, Front-To-Back Leveling and Transport Height Adjustment procedures, in order, as follows.

### Side-To-Side Leveling

1. With the mower installed, place the rider on a smooth, level surface such as a concrete floor. Turn the front wheels straight forward.
2. Check for bent blades and replace if necessary.
3. Loosen nut (C, Figure 26) so trailing arms are loose. Mower must be resting on rollers with no weight on trailing arms.
4. Use the Dial-A-Cut™ Control (E, Figure 27) and place mower in mid-cut position by aligning front edge of mower lift lever (A) with number 2 or 3 on quadrant scale. Make sure mower lift lever is in down position.
5. Make sure rear rollers (C, Figure 28) are on the ground. If not, refer to Transport Height Adjustment.

   *NOTE: If rollers do not rest on the ground and it is necessary to perform transport height adjustment, it is necessary to perform transport height adjustment again after all leveling procedures are completed.*
6. Position blade(s) side-to-side and measure distance form outside tip of blade(s) to ground. Measurement should be equal (within 1/8”).
7. See Figure 28. On left side of mower, make sure eccentric nut is in correct position as shown. Loosen outside nut (A) and rotate eccentric nut (B) so that flat side with hole closest to it is towards the rear. Tighten outside nut (A) while holding eccentric nut (B).
8. On right side of mower, loosen outside nut (A). Turn eccentric nut (B) counterclockwise to raise side of mower, or clockwise to lower right hand side of mower.

*NOTE: Do not turn eccentric nut more than 1/4 turn in either direction. When adjusted beyond 1/4 turn, nut will move mower in opposite direction than when starting adjustment.*

9. When adjustment is correct, hold eccentric nut (B) and tighten nut (A) to 30 ft. lbs. Check measurement on both sides of mower.

**⚠ WARNING**

Before checking mower, shut off PTO and engine. Allow all moving parts to stop. Remove ignition key, then disconnect the spark plug wire and fasten it away from the spark plug.

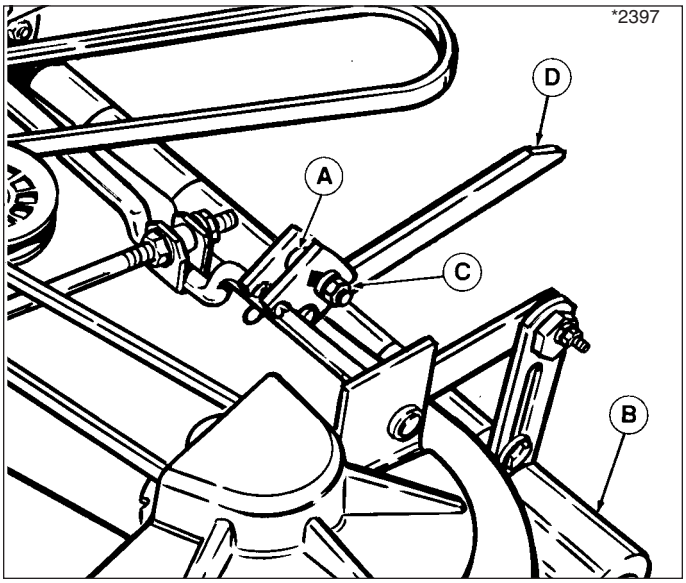



**Figure 26. Trailing Arms**

**A. Spacers**
**B. Rear Mower Rollers**
**C. Nut**
**D. Rear Trailing Arms**

**⚠ WARNING**

Mower blades are sharp. Turn the mower drive belt to rotate blades into position or wear protective gloves to protect against injury.

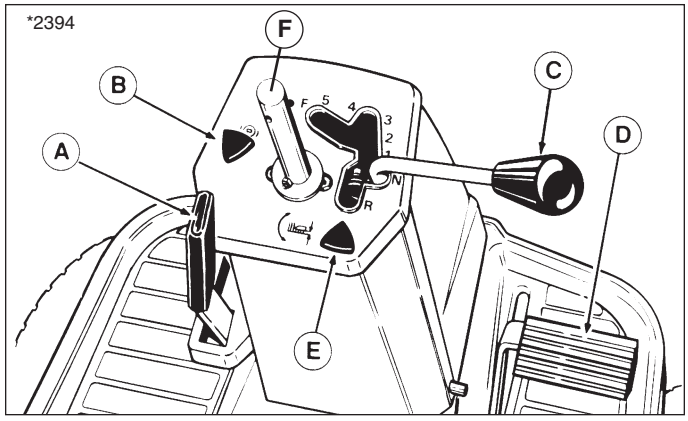



**Figure 27. Dash Controls (shown with steering wheel removed)**

**A. Mower Lift Lever**
**B. Parking Brake Knob**
**C. Ground Speed Lever**
**D. Clutch/Brake Pedal**
**E. Dial-A-Cut™ Control**
**F. Steering Shaft**

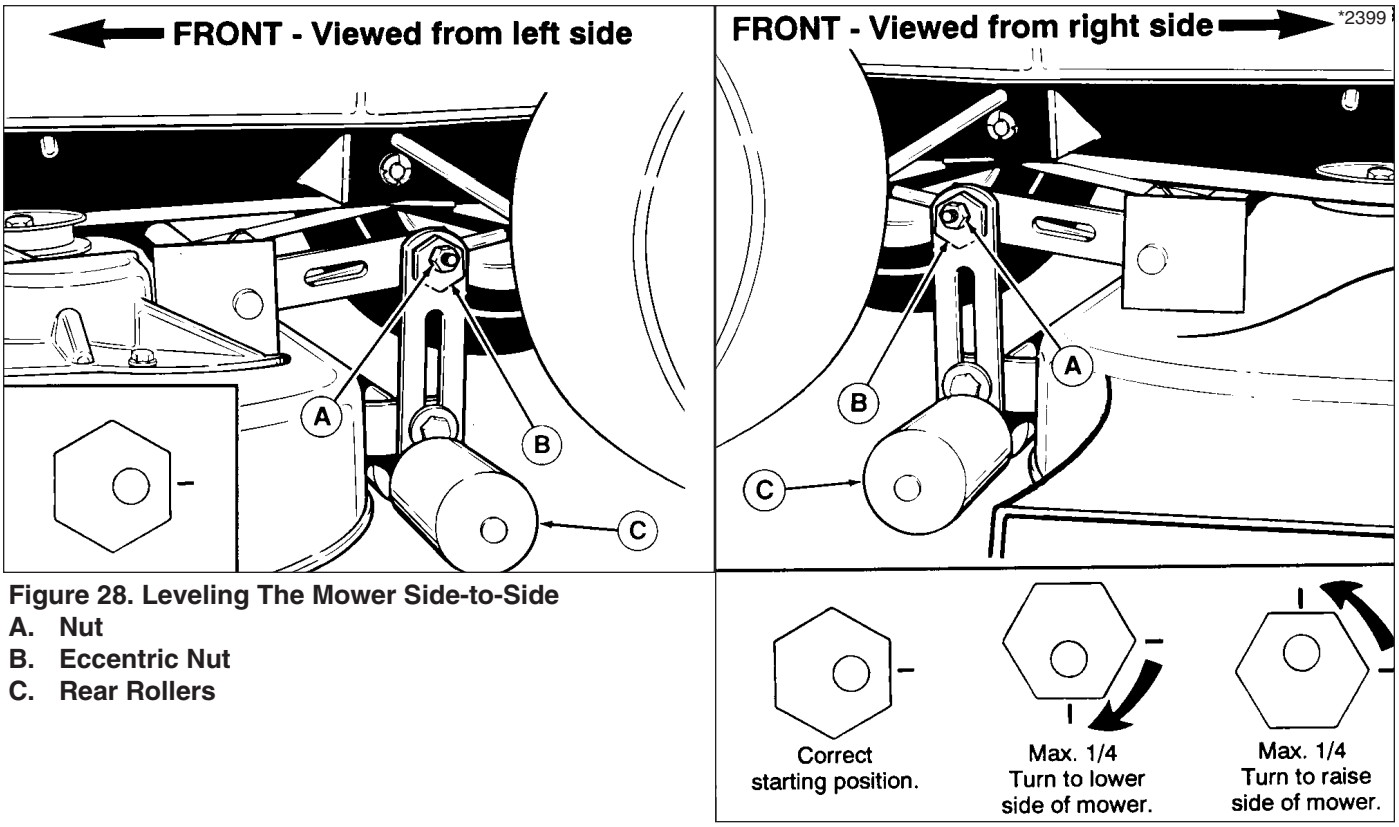



**Figure 28. Leveling The Mower Side-to-Side**
- **A. Nut**
- **B. Eccentric Nut**
- **C. Rear Rollers**

## Front-To-Back Leveling

1. Make sure mower is level side-to-side and that rear rollers are on the ground.
2. Position blade(s) front-to-back. Measure the distance from the ground to front tip of blade(s), and from ground to rear tip of blade(s).

   **On 30" mower,** the front tip should be level to 1/8" (3 mm) higher than rear tip.

   **On 34" mower,** the front tips should be 1/4" (6 mm) higher than the rear tips.
3. See Figure 29. Loosen jam nut (E). To lower rear of mower deck, loosen nut (B) which will lengthen leveling rod (D). To raise rear of deck, shorten leveling rod (D). When proper measurement is obtained, tighten nut (A) against bracket, then tighten jam nut (E) against nut (A).

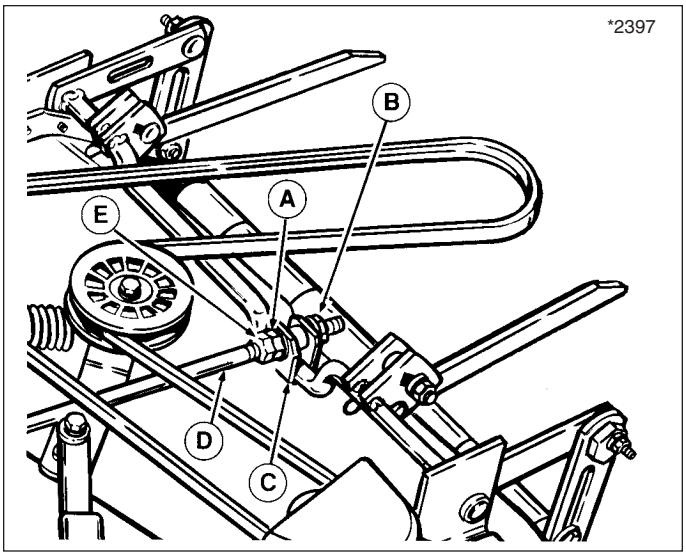



**Figure 29. Front-To-Back Levelling**
- **A. Adjustment Nut**
- **B. Rear Nut**
- **C. Bracket**
- **D. Levelling Rod**
- **E. Jam Nut**

### Transport Height Adjustment

Transport height should be adjusted so that rear mower rollers are 1/8” - 1/4” (3-6 m) above ground when mower lift lever is in transport position. To adjust, perform both mower leveling procedures first, then do the following procedure.

See Figure 30.

1. Park rider on a flat level surface.
2. Adjust Dial-A-Cut™ control so that front edge of mower lift lever is aligned with 2-3/4” mark (34” mower) or at 3” mark (30” mower) on the quadrant scale.
3. Loosen nut (C) and position spacer (A) against rear trailing arms (D). Position both the left and right side spacers against trailing arms.
4. Tighten nut (C) securely.
5. Place mower lift lever in transport position. Rear mower rollers should be 1/8” - 1/4” off ground. If not, repeat steps 2 - 4.

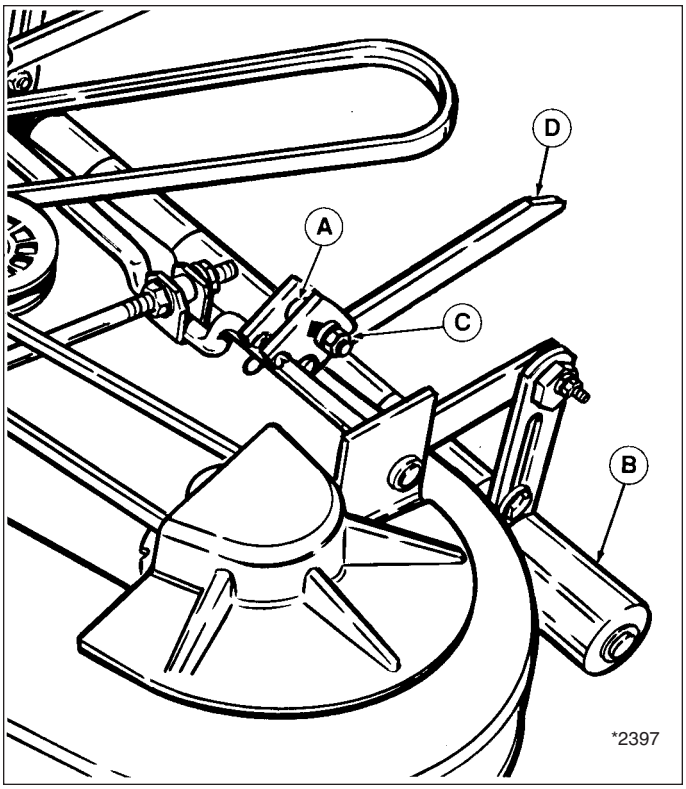



**Figure 30. Transport Height Adjustment**

**A. Spacers** **C. Nut**
**B. Rear Mower Rollers** **D. Rear Trailing Arms**

## BATTERY CHARGING

### ⚠ WARNING

**Keep open flames and sparks away from the battery; the gasses coming from it are highly explosive. Ventilate the battery well during charging.**

A dead battery or one too weak to start the engine may be the result of a defect in the charging system or other electrical component. If there is any doubt about the cause of the problem, see your dealer. If you need to replace the battery, follow the steps under Cleaning the Battery & Cables in the Regular Maintenance Section.

To charge the battery, follow the instructions provided by the battery charger manufacturer as well as all warnings included in the safety rules sections of this book. Charge the battery until fully charged (until the specific gravity of the electrolyte is 1.250 or higher and the electrolyte temperature is at least 60° F). Do not charge at a rate higher than 10 amps.

# Belt Replacement

**To avoid damaging belts, DO NOT PRY BELTS OVER PULLEYS.**

## RIDER DRIVE BELT

Replacement of the rider drive belt requires removal of the transmission and carrier frame. Should the drive belt ever fail, contact your dealer for replacement.

## MOWER BELT - 30”

See Figure 31.

1. Mower does not need to be removed to install a new belt. However, for easier access, mower can be removed following steps in “Mower Removal and Installation.
2. If mower is not removed, place mower in lowest cutting position. Pull idler pulley arm (A) towards you to relieve belt tension. Remove belt from idler pulley (B) and center arbor pulley (C).
3. Remove belt from front idler pulley (D) and PTO pulley (E).
4. Replace old belt with new belt. Make sure V-side of belt runs in all pulley grooves except for idler pulley (B). Check belt pattern as shown.
5. Install mower if it was removed, and install belt on PTO pulley (E).

## MOWER BELT - 34”

See Figure 32.

1. Mower does not need to be removed to install a new belt. However, for easier access, mower can be removed following steps in “Mower Removal and Installation.
2. If mower is not removed, place mower in lowest cutting position. Push idler pulley arm (A, Figure 31) away from you to relieve belt tension. Remove belt from idler pulley (B) and PTO pulley (C).
3. Remove the three capscrews (D, Figure 31) securing the left-hand arbor cover.
4. Remove old belt from arbor pulleys and replace with new belt. Make sure V-side of belt runs in all arbor pulley grooves and flat side of belt runs against idler pulley. See Figure 33 for belt pattern
5. Install mower if it was removed, and install belt to PTO pulley (C, Figure 32). Push idler arm and install belt around idler pulley.

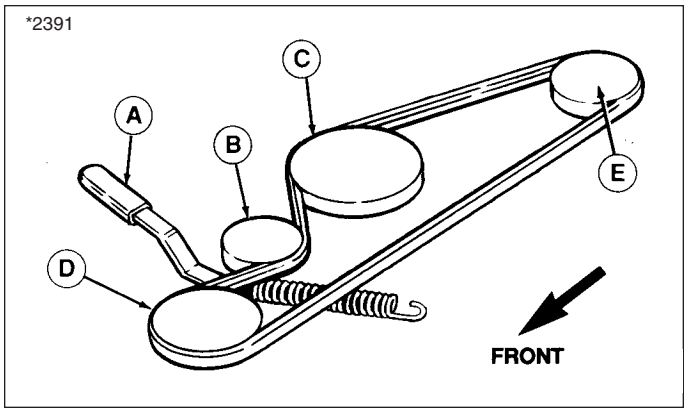



**Figure 31. Belt Pattern - 30” Mower**

A. Idler Pulley Arm
B. Idler Pulley
C. Center Arbor Pulley
D. Front Idler Pulley
E. PTO Pulley (Electric Clutch)

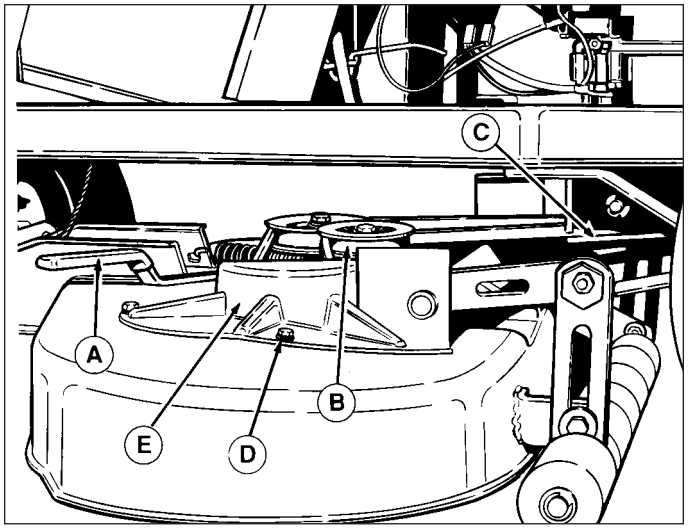



**Figure 32. Mower Belt Replacement - 34”**

A. Idler Pulley Arm
B. Idler Pulley
C. PTO Pulley
D. Capscrews
E. Arbor Cover

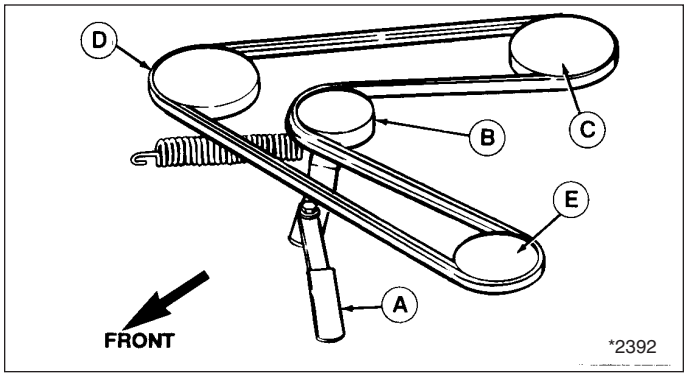



**Figure 33. Belt Pattern - 34” Mower**

A. Idler Arm Pulley
B. Idler Pulley
C. PTO Pulley
D. Right Arbor Pulley
E. Left Arbor Pulley

# Specifications

*NOTE: Specifications are correct at time of printing and are subject to change without notice.*

## ENGINE

### 11 HP I/C — Briggs & Stratton

**Horsepower** 10.5 HP @ 3600 rpm
**Displacement** 28.4 Cu. In. (465 cc)
**Electrical** 12 Volt, 3 Amp D.C. Battery: 200 CCA
**Oil Capacity** 3 Pints (1.42 L)

### 13 HP Diamond OHV — Briggs & Stratton

**Horsepower** 13 HP @ 3600 rpm
**Displacement** 28.4 Cu. In. (465 cc)
**Electrical** 12 Volt, 3 Amp D.C. Battery 200 CCA
**Air Cleaner** Pre-Cleaned Air to Paper Filter
**Oil Capacity** 3 Pints (1.42 L)

### 14 HP Command™ — Kohler

**Horsepower** 14 HP @ 3600 rpm
**Displacement** 24.3 Cu. In. (398 cc)
**Electrical** 12 Volt, 15 Amp Alternator Battery: 200 CCA
**Oil Capacity** 4 Pints (1.9 L)

### 16 HP Command™ — Kohler

**Horsepower** 16 HP @ 3600 rpm
**Displacement** 27.9 Cu. In. (460 cc)
**Electrical** 12 Volt, 15 Amp Alternator Battery: 200 CCA
**Oil Capacity** 4 Pints (1.9 L)

## TRANSMISSION

### Gear Models

**Type** Spur Gear
**Lubrication** Bentonite Grease. Transmission is a sealed unit.
**Ground Speeds**
**1st:** 1.2 MPH (1.9 km/h)
**2nd:** 2.4 MPH (3.9 km/h)
**3rd:** 3.5 MPH (5.6 km/h)
**4th:** 4.4 MPH (7.1 km/h)
**5th:** 5.6 MPH (9.0 km/h)
**Reverse:** 2..0 MPH (3.2 km/h)

### Hydro Models

**Type** Hydrostatic
**Lubrication** Transmission is a Sealed Unit
**Ground Speeds** Infinite Forward: 0-5.2 MPH (0-8.4 km/h)
Reverse: 0-2.3 MPH (0-3.7 km/h)

## CHASSIS

**Front Wheels** Tire Size 13 x 5.00-6
Pneumatic Inflation Pressure 10 -12 psi (68 - 82 kPa)
**Rear Wheels** Tire Size 16 x 6.50-8
Pneumatic Inflation Pressure 10 -12 psi (82 - 103 kPa)
**Fuel Tank** Material: Non-Corrosive Polyethylene Alloy
Capacity: 2 Gallons (7.5 L)
**Turning Radius** Inside Rear Tire 12 In. (30.2 cm)

## DIMENSIONS

**Overall Length** 61 In. (155 cm)
**Overall Width**
**- w/30 mower** 38.5 In. (97.8 cm)
**- w/34 mower** 45.5 In. (115.6 cm)
**- at rear wheels** 33 In. (83.8 cm)
**Height at**
**- steering wheel** 41 In. (104.1 cm)
**- seat back** 35 In. (88.9 cm)
**- engine cover** 28 In. (71.1 cm)
**Wheel Base** 43 In. (109.2 cm)
**Weight (apx.)**
**- 8.5 HP w/30”mower** Net: 405 lbs. (183 kg)
**- 12 HP w/30”mower** Net: 405 lbs. (183 kg)
**- 12 HP w/34”mower** Net: 405 lbs. (183 kg)
**- 13 HP w/34”mower** Net: 405 lbs. (183 kg)

# Parts & Accessories

## REPLACEMENT PARTS

Replacement parts are available from your authorized dealer. Always use genuine Simplicity Service Parts.

## MAINTENANCE ITEMS

Many convenient and helpful service and maintenance items are available from you authorized dealer. Some of these items include:

Engine Oil
Touch-Up Paint
Grease Gun Kit
8 oz. Grease Tube
Tire Sealant
Degrimer/Degreaser
Gas Stabilizer

## OPTIONAL ACCESSORIES

Twin Bag Grass Catcher
Dump Cart
Hour Meter Kit
Gas Cans
Front Weight

## TECHNICAL MANUALS

Additional copies of this manual are available, as well as fully illustrated parts lists. These manuals show all of the product's components in exploded views (3D illustrations which show the relationship of parts and how they go together) as well as part numbers and quantities used. Important assembly notes and and torque values are also included.

For applicable manuals currently available for your model, contact our Customer Publications Department at 262-284-8519. Have the information listed in the box below available when phoning in your request.

**Model:** _____

**Mfg. No.:** _____

**Your Name:** _____

**Address:** _____

**City, State, Zip:** _____

**Visa/Mastercard No.:** _____

**Card Expiration Date:** _____

# Lawn Care & Mowing Information

## GENERAL INFORMATION

Proper mowing is an important part of maintaining your lawn in the best possible condition. A healthy and well maintained lawn is better able to resist drought, weeds, and other stresses. But too much maintenance is as detrimental to your lawn as neglect. Proper care for your lawn involves more than just “cutting the grass.” To have a healthy lawn, you need to know:

- ✘ Types of Grass, Climate and Conditions
- ✘ How and When to Water, Fertilize & Aerate
- ✘ How High to Mow the Grass
- ✘ When and How Often to Mow
- ✘ What Mowing Patterns to Use
- ✘ Proper Mowing Methods
- ✘ How to Solve Common Mowing Problems

## TYPES OF GRASS, CLIMATE AND CONDITIONS

A variety of grasses are commonly grown in household lawns, but two main groups known as cool-season grasses (varieties of bluegrass, ryegrass, and fescue), and warm-season grasses (typically bermuda, buffalo-grass, and zoysia varieties) are the most common.

The cool-season grasses are better suited to cooler climates, and do not endure hot and dry weather as well as warm-season grasses, but conversely, the warm-season grasses do not grow as well in cooler climates. Most residential lawns are typically seeded with a mixture of these grasses. (A local nursery or lawn center may help you to identify what kind of grass your lawn contains from a sample.)

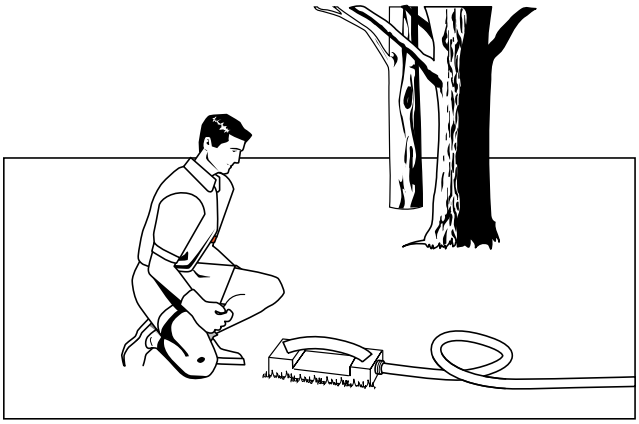
Knowing your climate and conditions is also important to proper lawn care. Drier climates or conditions will require additional watering, while wetter climates may require more frequent mowing.

## HOW AND WHEN TO WATER, FERTILIZE & AERATE

Every lawn’s watering needs are unique and are dependent upon the type of grass and soil, the amount of local rainfall, and other conditions. **Most lawns are watered too often, but with too little water.** However too much water can allow development of diseases with your lawn. **It is best to water the lawn only when necessary, and then to water it slowly, evenly, and deeply—imitating a slow, soaking rain.**

#### WHEN TO WATER YOUR LAWN

When the lawn begins to wilt, the grass’s color dulls, or footprints stay compressed for more than a few seconds, the lawn is beginning to dry out, and needs additional moisture. The best time to water is early morning to allow the water to soak deeply into the lawn and reduce the amount that evaporates in the hot afternoon sun.



#### HOW TO WATER YOUR LAWN

The best method of watering a lawn is to imitate a slow, soaking rain, applying about 1 inch of water. A method of verifying the amount that you have watered, is to place several empty tin cans (low shallow cans work best) in various spots around the lawn, and check the depth of water in the can during the watering process.

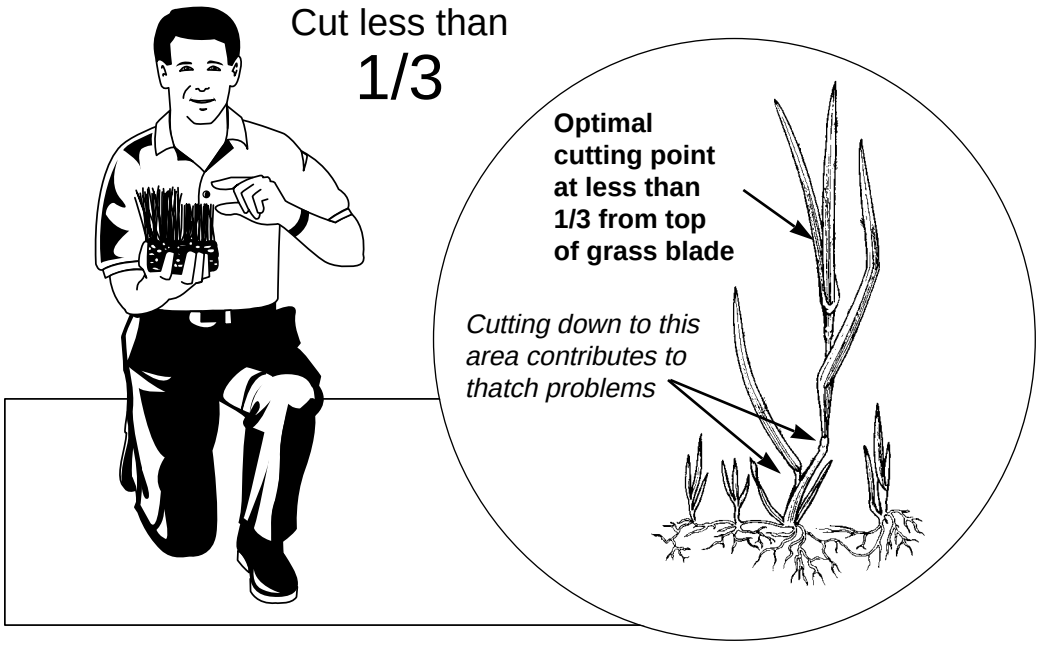
#### HOW TO FERTILIZE YOUR LAWN

Fertilizing with a slow-release fertilizer provides missing nutrients which help create slow, even growth. While opinions vary on the need for fertilizing, when and how much to fertilize will be more a factor of the condition of the lawn and soil than any routine. Remember that over-fertilizing can cause harm, and that most fertilizing should be applied in the spring so that it will release into the lawn through the summer. For more information, check with a local nursery or lawn care specialist, and read and follow the fertilizer manufacturer’s instructions.

#### AERATING YOUR LAWN

Consider aerating your lawn in spring. Using an aerator to remove cores of soil from the lawn increases the speed of clipping decomposition and encourages deeper root growth by opening up the soil and permitting greater movement of water, fertilizer and air.

## HOW HIGH TO MOW THE GRASS


Cut less than
1/3
Optimal cutting point at less than 1/3 from top of grass blade
Cutting down to this area contributes to thatch problems

*Often cutting height is a matter of personal preference. Typically, you should mow the grass when it is is between three and five inches high.* The proper cutting height range for a specific lawn will depend upon several factors, including the type of grass, the amount of rainfall, the prevailing temperature, and the lawn's overall condition.

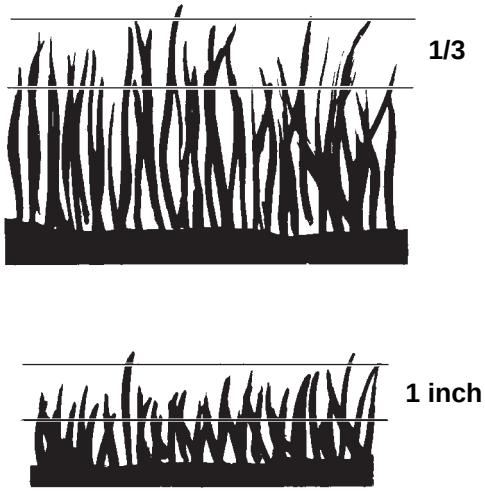
Cutting the grass too short causes weak, thin grass plants, which are easily damaged by dry periods and pests. Cutting too short is often more damaging than allowing the grass to be slightly higher.

Letting grass grow a bit longer—especially when it is hot and dry—reduces heat build-up, preserves needed moisture and protects the grass from heat damage and other problems. However, allowing grass to grow too high can cause thin turf and additional problems.

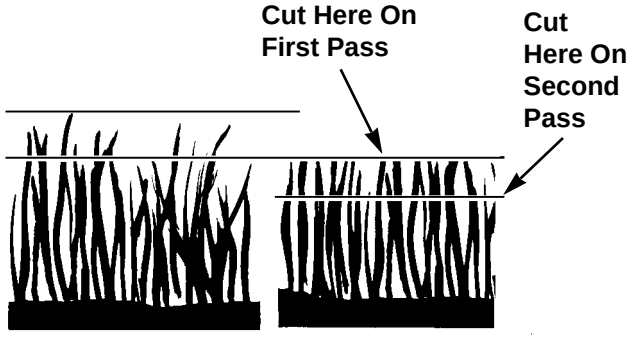
Cutting off too much at one time shocks the plant's growth system and weakens the grass plants. **A good rule of thumb is the 1/3 rule: to cut no more than one third of the grass height, and never more than 1 inch at a time.**

The amount of grass you are able to cut in one pass is also effected by the type of mowing system you are using (for example, broadcasting with side discharge decks can process a much larger volume of grass than mulching does).

*NOTE: We cover some specific mowing instructions for mulching and broadcasting later in this Lawn Care section.*



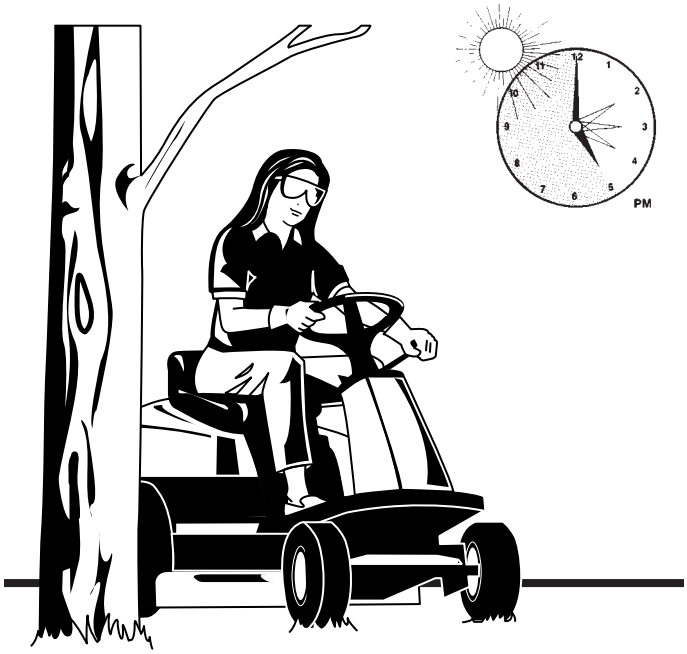

**Proper Cutting Height**




### Tall Grass Requires Incremental Cutting

For extremely tall grass, set the cutting height at maximum for the first pass, and then reset it to the desired height and mow a second or third time.

Don't cover the grass surface with a heavy layer of clippings. Consider using a grass collection system and starting a compost pile.




## WHEN AND HOW OFTEN TO MOW

The time of day and condition of the grass greatly affect the results you'll get when mowing. For the best results, follow these guidelines:

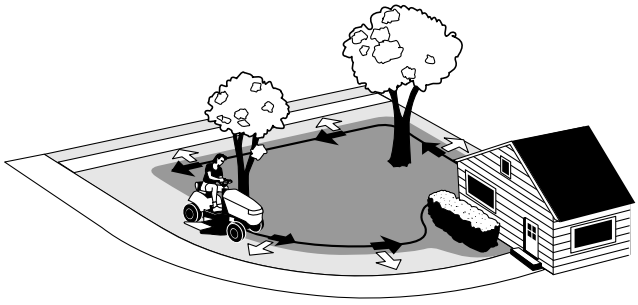
- Mow when the grass is between three and five inches high.
- Mow with sharp blades. Short clippings of grass one inch or shorter decompose more quickly than longer blades. Sharp mower blades cut grass cleanly and efficiently, preventing frayed edges which harm the grass.
- Mow at time of day when the grass is cool and dry. Late afternoon or early evening often provide these ideal mowing conditions.
- Avoid mowing after rain or even heavy dew, and never mulch when the grass is wet (moist grass does not mulch well, and clumps beneath the mower deck).

## WHAT MOWING PATTERNS TO USE

Always start mowing on a smooth, level area.

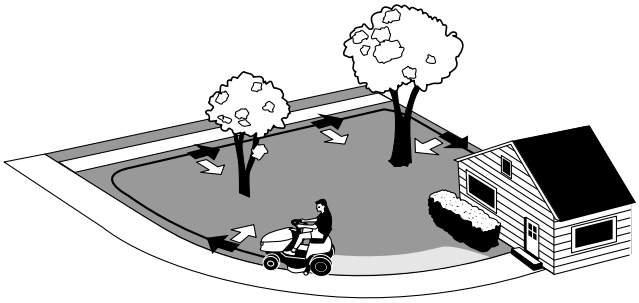
The size and type of area to be mowed will determine the best mowing pattern to use. Obstructions such as trees, fences and buildings, and conditions such as slopes and grades must also be considered.

- Cut long straight strips overlapping slightly.
- Where possible, change patterns occasionally to eliminate matting, graining or a corrugated appearance.
- For a truly professional cut, mow across the lawn in one direction, then recut the lawn by mowing perpendicular to the previous cut.



*The remainder of the mowing should be done in the opposite direction so that the clippings are dispersed OUT onto the area of lawn previously cut.*

*Where possible, make one or two passes around the outside of the area discharging the grass INTO the lawn to keep the cut grass off fences and walks.*



***Note: Always operate the engine at full throttle when mowing.***

If you hear the engine slowing down, you are mowing too fast—using a slower ground speed will improve the cutting efficiency of the blades and prevents many common cutting problems. Use an appropriate ground speed for the thickness and height of the grass you are cutting (3rd gear or slower for manual gear models). If you hear the engine slowing down you are mowing too fast, use a slower ground speed.

## MOWING METHODS

### Proper Broadcast Mowing

Broadcasting, or side-discharging, disperses fine clippings evenly over the entire lawn. Many golf courses use this method. Your mower has a deep dish deck to allow freer circulation of clippings so they are broadcast evenly over the lawn.

**ENGINE SPEED & GROUND SPEED FOR BROADCASTING**

Always operate the engine at full throttle when mowing. If you hear the engine slowing down, you are mowing too fast—using a slower ground speed will improve the cutting efficiency of the blades and prevents many common cutting problems.

ALWAYS use an appropriate ground speed for the thickness and height of the grass you are cutting (3rd gear or slower for manual gear models). If you hear the engine slowing down you are mowing too fast, use a slower ground speed.

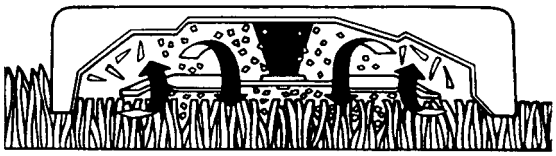
**HOW MUCH GRASS TO CUT OFF WHEN BROADCASTING**

Mow when the grass is 3-5 inches long. Do not cut the grass shorter than 2 to 2-1/2 inches. Do not cut off more that 1 inch of grass in a single pass.

### Proper Mulching

Mulching consists of a mower deck which cuts and recuts clippings into tiny particles and which then blows them down INTO the lawn. These tiny particles decompose rapidly into by-products your lawn can use. UNDER PROPER CONDITIONS, your mulching mower will virtually eliminate noticeable clippings on the lawn surface.

**Mulching Action**



NOTE: When mulching under heavy cutting conditions, a rumbling sound may be present and is normal.

**MULCHING REQUIRES EXCELLENT MOWING CONDITIONS**

Mulching mowers cannot function properly if the grass is wet, or if the grass is simply to high to cut. Even more than normal mowing, mulching requires that the grass be dry and the the appropriate amount is cut.

Do not use the mower as a mulching mower during the first two or three mowings in the spring. The long grass blades, quick growth, and often wetter conditions are more suitable for broadcasting (side-discharging) or grass bagging operation.

**ENGINE SPEED & GROUND SPEED FOR BROADCASTING**

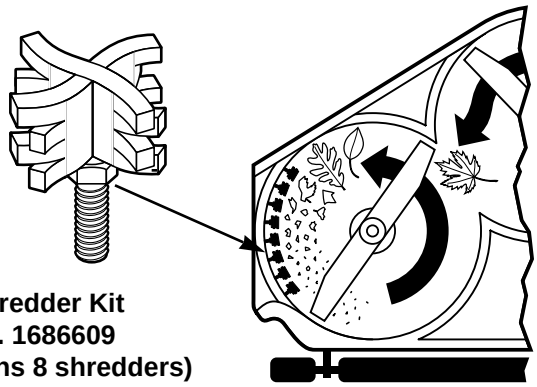
Use full engine throttle matched with a slow ground speed so that clippings will be finely cut. Ground speed while mulching should be HALF of the speed that would be used when broadcasting (side discharging) under similar conditions. Since mulching requires more horsepower than broadcasting, using a slower ground speed is vitally important for proper mulching operation.

**HOW MUCH GRASS TO MULCH**

The best mulching action typically results from cutting only the top 1/2 inch to 3/4 inch of grass blade. This provides short clippings which decompose properly (much more quickly than longer clippings). The ideal cutting height will vary with climate, time of year, and quality of your lawn. We recommend that you experiment with both the cutting height and ground speed until you achieve the best cut. Start with a high cutting height and using progressively lower settings until you find a cutting height that is matched to your mowing conditions and preferences.

**LEAF SHREDDING (USE WITH OPTIONAL MULCHER KIT)**

Simplicity's patented Shredder Blades virtually eliminate raking leaves. Up to 512 cutting edges pulverize leaves into tiny particles, which quickly and naturally decompose into food for your lawn. The Shredder Blades must be removed when you mulch grass clippings.



**Leaf Shredder Kit**
**Part No. 1686609**
**(Contains 8 shredders)**

### TIPS On Dealing With Clippings

Clippings are **beneficial** to your lawn. A common misconception about clippings is that they automatically lead to thatch—this is untrue. Short clippings produced by broadcasting and clippings produced by mulching methods actually **contribute to a healthy lawn** because they:

- ✘ Reduce the evaporation of water from your lawn.
- ✘ Provide a cushioning layer to reduce lawn wear.
- ✘ Moderate soil temperature.
- ✘ Clippings act as a safe, non-polluting and inexpensive fertilizer that nourishes your lawn. Fresh cut grass blades are 85% water, and are a rich source of nitrogen which is essential to lush growth. And one garbage bag of clippings contains about 1/4 lb. of usable organic nitrogen.

## COMPOSTING

The best way to recycle excess clippings and leave your lawn looking immaculate is to collect them with an efficient collection system and deposit them in a compost pile. A compost pile is a collection of grass, leaves, and other organic wastes which—when properly tended—decompose into an odorless, topsoil material. This material, in turn, acts as an inexpensive fertilizer for your lawn and garden.

### How to start a healthy compost pile:

1 Build a bin using bricks, fencing, cement blocks, etc. or purchase a prefabricated bin from a garden store. The bin should also have venting on each side and from the bottom to the top.

2 Fill the bin with alternating layers of yard waste. Follow this recipe:

First layer: 3-4 inches of chopped brush or other coarse material.

Second layer: 6-8 inches of mixed leaves, grass clippings, sawdust, etc. Materials should be "sponge damp."

Third layer: 1 inch of soil to add micro-organisms that help break down organic matter.

Fourth layer: 1-2 inches of manure to provide the nitrogen needed by micro-organisms.

Keep adding layers until the bin is almost full. Top off with a 4-6 inch layer of straw and scoop out a "basin" to catch rain water.

3 Four or five days later the pile will reach temperatures of 140-160 degrees. At this time you'll notice it settling, a good sign your compost is working properly.

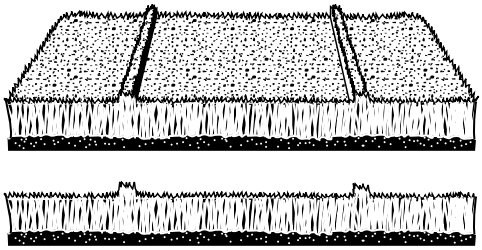
4 After 5-6 weeks, fork materials into a new pile, turning the outside of the old heap into the center of the new one. Add water if necessary. The compost should be ready to use within three to four months when dark brown, crumbly, and earthy-smelling.

## SOLUTIONS FOR COMMON MOWING PROBLEMS

### Streaking

Streaking is when thin strips of uncut grass are left behind the mower. Streaking is usually caused by operator error or poor blade maintenance.

**Streaking**

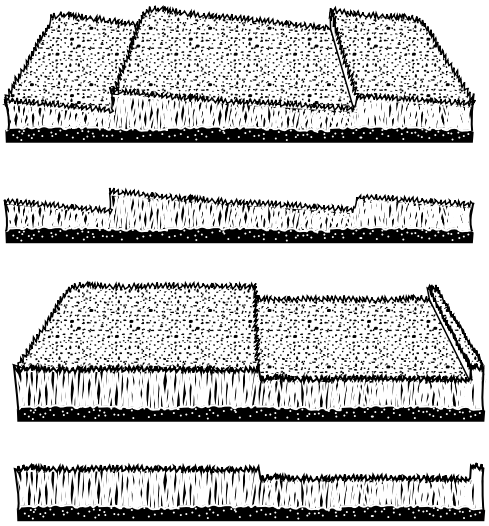


| CAUSE | SOLUTION |
|---|---|
| Blades are not sharp | Sharpen your blades |
| Blades are worn down too far | Replace your blades |
| Engine speed is too slow | Always mow at full throttle |
| Ground speed is too fast | Slow down |
| Deck is plugged with grass | Clean out the mower |
| Not overlapping cutting rows enough | Overlap your cutting rows |
| Not overlapping enough when turning | When turning your effective cutting width decreases–overlap more when turning |

### Stepped Cutting

Stepped cutting is sharp ridges or uneven levels left in the lawn surface. Stepped cutting is usually caused by mower deck damage or misadjustment, or damage to mower blades.

**Stepped Cutting**

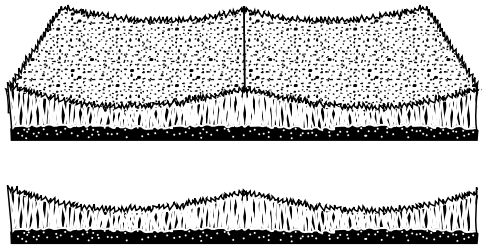


| CAUSE | SOLUTION |
|---|---|
| Deck is not leveled correctly | Level the deck correctly |
| Tires are not properly inflated | Check and inflate the tires |
| Blades are damaged | Replace the blades |
| Deck shell is damaged | Repair or replace the deck |
| Mower spindle is bent or loose | Repair or replace the spindle |
| Blades are installed incorrectly | Reinstall the blades correctly |

## Uneven Cutting

Uneven cutting is waviness or smooth troughs in the lawn surface. Uneven cutting is usually caused by mower deck damage or misadjustment.

**Uneven Cutting**

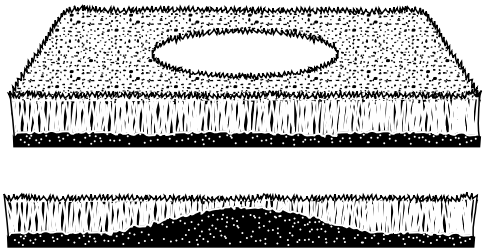


| CAUSE | SOLUTION |
|---|---|
| Deck is not leveled correctly | Level the deck correctly |
| Blades are dull or worn | Sharpen or replace the blades |
| Blades are damaged | Replace the blades |
| Deck is clogged with grass clippings | Clean out the deck |
| Deck shell is damaged | Repair or replace the deck |
| Mower spindle is bent or loose | Repair or replace the spindle |
| Blades are installed incorrectly | Reinstall the blades correctly |

## Scalping

Scalping is when the mower deck comes close to or hits the ground. Scalping can be caused by the mower deck misadjustment, unevenness in the lawn, or by mower deck bouncing because the ground speed is too fast.

**Scalping**

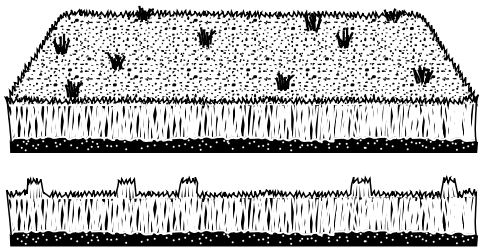


| CAUSE | SOLUTION |
|---|---|
| Lawn is uneven or bumpy | Roll or level the lawn |
| Mower deck cutting height is set too low | Raise the cutting height |
| Ground speed is too fast | Slow down |
| Deck is not leveled correctly | Correctly level the deck |
| Tire pressure is low or uneven | Check and inflate the tires |

## Stingers

Stingers are sparse patches of uncut grass left behind the mower. Stingers are usually caused by operator error or poor blade maintenance.

**Stingers**



| CAUSE | SOLUTION |
|---|---|
| Blades are not sharp or are nicked | Sharpen your blades |
| Blades are worn down too far | Replace your blades |
| Engine speed is too slow | Always mow at full throttle |
| Ground speed is too fast | Slow down |
| Deck is plugged with grass | Clean out the mower |

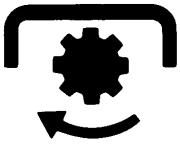
## Common International Symbols

Choke

Fast (Throttle)

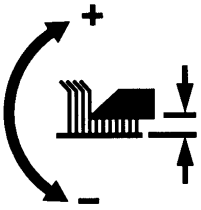
Slow (Throttle)

Throttle



PTO Clutch Engaged

Parking Brake



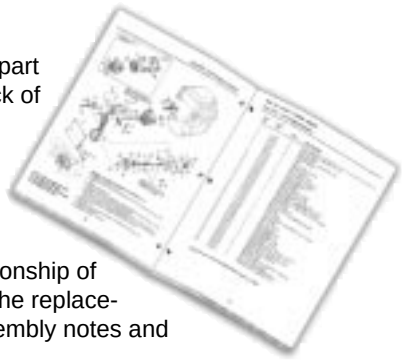
Mower Cutting Height Adjustment

## Technical Manuals

### Additional Technical Literature Available

***Operators Manuals***

Additional copies of this manual are available, (and as part of our product support commitment, we maintain a stock of printed operators manuals going back many years!)



***Parts Manuals***

Fully illustrated parts manuals are also available — these manuals show all of the product's components in exploded views ("3D" illustrations which show the relationship of the parts and how they go together), as well as giving the replacement part numbers and quantities used. Important assembly notes and special torque values are included in these manuals.

*For the applicable manuals currently available for your model, contact our Customer Publications Department at 262-284-8519. Have the information listed in the box at the right available when phoning in your request.*

***Please allow 3 to 4 weeks for delivery.***

**Model:** _____

**Mfg. No.:** _____

**Your Name:** _____

**Address:** _____

**City, State, Zip:** _____

**Visa/Mastercard No.:** _____

**Card Expiration Date:** _____